

# The Mining Journal,

## RAILWAY AND COMMERCIAL GAZETTE:

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

[The Mining Journal is Registered at the General Post Office as a Newspaper, and for Transmission Abroad.]

No. 2554.—Vol. LIV.

LONDON, SATURDAY, AUGUST 2, 1884.

WITH SUPPLEMENT. PRICE SIXPENCE. BY POST, £1 4s. PER ANNUM.

**R. JAMES H. CROFTS, STOCK AND SHARE DEALER,**  
No. 1, FINCH LANE, CORNHILL, LONDON, E.C.  
ESTABLISHED 1842.

BUSINESS transacted in all descriptions of MINING STOCKS and SHARES (British and Foreign), Consols, Bonds (Foreign and Colonial), Railways, Insurance, Assurance, Telegraph, Shipping, Gas, Water, and Dock Shares, and all Miscellaneous Shares.

BUSINESS negotiated in STOCKS and SHARES not having a general market value.

Every Friday a GENERAL and RELIABLE LIST issued (a copy of which will be forwarded on application), containing closing prices of the week.

MINES INSPECTED.  
BANKERS: CITY BANK, LONDON—SOUTH CORNWALL BANK, St. Austell.  
TELEPHONE NUMBER 1003.

SPECIAL DEALINGS in the following (or part):—

Asia Minor, 3s.	75 Grosvenor, 1s.	65 Prince of Wales, 4s.
Akankoo, fully paid, 10s.	100 Guinea Coast Gold, 2s.	100 Pastorena, 2s.
Almaden, 5s. 3d.	15 Great Laxey, £9 7s 6d.	20 Rio Tinto, £15.
Bedford United, 29s 6d.	25 Gunnslake (Clitters), 11s.	15 Ruby, 10s.
Bratsberg, 31s. 3d.	100 Hoover Hill, 4s 6d.	100 Rhodes Reef, 2s. 6d.
Cankim Bamoo, 2s 3d.	80 Home Mines Trust, 11s. 9d.	10 Roman Grav., £2 18 9
Carn Camborne, 1s.	160 Indian Consol., 2s 9d.	25 Schwab's Gully, 30s.
Callao Bis, 8s. 9d.	210 Indian Glenrock, 3s.	40 South Caradon, 9s.
Chile Gold, 3s. 9d.	100 Javali, 2s. 6d.	15 So. Condurrow, £2 6
Colombian Hydraulic, 7s. 3d.	75 Kapanga, 3s.	65 South Darren, 10s.
Consolidated, 2s. 6d.	30 Killfret, 7s. 9d.	80 South Devon Uni., 3s.
California, 14s. 9d.	100 Kongsberg, 10s.	36 So. Penrith, 1s 6
Colorado, 33s. 9d.	70 La Plata (New), 5s.	50 Tambrachery, 10s.
Canada Copper, 4s.	85 Last Chance, 1s.	15 Tolima A, £2 17s. 6d.
Chontales, 3s. 6d.	25 Leadhills, £1 16s. 3d.	20 ditto B, £5 12s. 6d.
Cor. South Australian, 10s. 3d.	115 Lisbon-Berlyn, 13s. 6	60 Transvaal Gold, 25s.
Copper, 2s. 3d.	100 Michipicoten, 10s.	55 Trevaunance, 5s. 3d.
Denver, 2s.	10 Mona, 10s.	20 Trevaunance, 10s.
Devon Copper, 3s. 9d.	100 Mounts Bay, 2s 9d.	35 United Mexican, £3 3/4
Devon Consol., £2 17 6	150 Mysore Gold, 9s.	80 Victoria Gold, 9s. 6d.
Devon Friend, 2s. 3d.	200 New Caradon, 1s. 6d.	20 Van, 10s.
Devon United, 5s.	100 New Callao, 2s. 6d.	10 Wheal Agar, £16 18 9
Dolcoath, 10s.	60 New Emma, 7s. 9d.	100 Wheal Basset, 10s.
Don Pedro, 10s.	15 New Quebrada, 10s.	135 West Callao, 3s. 3d.
Drake's, 2s. 6d.	20 New Kitty, 2s.	40 West Phoenix, 1s.
Duchy Peru, 10s.	200 Nouveau Monde, 2s 3	75 West Caradon, 1s.
East Blue Hills, 6s.	85 New W. Caradon, 4s.	60 West Orebor, 9s.
Eberhard, 4s. 6d.	200 Old Shepherds, 8s 9d	100 West Polbrean, 10s.
East Caradon, 10s.	50 Organos, 12s. 6d.	10 West Kitty, 10s.
East Lovell, 10s.	100 Orita, 21s.	35 Wheal Orebor, 29s.
East Wheel Rose, 9s.	100 Oscar, 7s. 6d. p. 14s	75 Wheal Kitty, 10s.
Ecton, 21s. 3d.	90 Potosi (New), 10s.	100 Wheal Silver & Lan-
Fransvaal, 14s. 6d.	150 Port Phillip, 2s. 3d.	teglow, 10s.
Goginan, 10s.	50 Parys Copper, 1s.	50 Wynand Perseu., 1s.
Gold Coast, 3s. 6d.	50 Panulillo, £4 12s. 6d	

\* SHARES SOLD FOR FORWARD DELIVERY (ONE, TWO, OR THREE MONTHS) ON DEPOSIT OF TWENTY PER CENT.

\* BUSINESS at CLOSURE PRICES in all Market TIN, COPPER, LEAD, SILVER, and DIAMOND SHARES

**JAMES H. CROFTS, 1, FINCH LANE, LONDON**

**RAILWAYS—SPECIAL BUSINESS.**—Fortnightly Accounts opened on receipt of the usual cover.

**FOREIGN BONDS—SPECIAL BUSINESS.**—Fortnightly Accounts opened on receipt of the usual cover.

**AMERICAN AND CANADIAN STOCKS AND SHARES—SPECIAL BUSINESS.**—Fortnightly Accounts opened on receipt of the usual cover.

**GOLD AND SILVER MINES.—SPECIAL BUSINESS in ALL** marketable INDIAN GOLD SHARES, and in Colombian Hydraulic, Callao Bis, Gold Coast, Guinea Gold Coast, Kongsberg, New Callao, Ocar, West Callao, Tolima A, Tolima B, La Plata, Rio Tinto, Fransvaal, Potosi, Chile, Nouveau Monde, Ruby, Richmond, Victoria.

\* SHARES in the ABOVE SOLD FOR FORWARD DELIVERY ONE, TWO, OR THREE MONTHS ON DEPOSIT OF TWENTY PER CENT.

**JAMES H. CROFTS, 1, FINCH LANE, LONDON.**

**MISCELLANEOUS SHARES of all DESCRIPTIONS BOUGHT or SOLD—SPECIAL BUSINESS.**—Brighton Aquarium, General Credit, Lion's Bay, Native Guano, Suez Canal, Westminster Aquarium, and Hotel.

\* SHARES SOLD FOR FORWARD DELIVERY, ONE, TWO, OR THREE MONTHS, ON DEPOSIT OF TWENTY PER CENT.

**JAMES H. CROFTS, 1, FINCH LANE, LONDON.**

**SCAR GOLD.—SPECIAL BUSINESS in either the FULLY or PARTLY PAID shares.**

**JAMES H. CROFTS, 1, FINCH LANE, LONDON.**

**FRANSVAAL GOLD AND SOUTH AFRICAN DIAMOND FIELDS.** SPECIAL BUSINESS in all Fransvaal Shares, including LISBON-BERLYN, TRANSVAAL, SPITZKOP, SCHWAB'S GULLY, KIMBERLEY, and BETH BLOCK.

\* SHARES in the ABOVE SOLD FOR FORWARD DELIVERY ON DEPOSIT OF TWENTY PER CENT.

**JAMES H. CROFTS, 1, FINCH LANE, LONDON.**

**MR. WILLIAM H. BUMPUS, STOCKBROKER AND MINING SHARE DEALER,**  
44, THREADNEEDLE STREET, LONDON, E.C.  
ESTABLISHED AT THIS ADDRESS IN 1867.

BUSINESS transacted in ALL STOCK EXCHANGE SECURITIES, MINING, and MISCELLANEOUS SHARES of every description.

An INVESTMENT LIST free on application.

Mr. BUMPUS devotes SPECIAL ATTENTION to LEGITIMATE MINES, and is in a position to afford reliable information and advice to intending investors and others respecting this class of securities.

SPECIAL BUSINESS in the undermentioned:—

Almaden, 5s. 9d.	2 East Pool, 10s.	25 New Kitty, 35s.
Akankoo, 11s. 6d.	50 East Blue Hills, 8s. 6d.	50 New Caradon, 10s.
Birdseye Creek, 17s. 6d.	25 Frongoch, 10s.	50 N. Trumpet Consols., 12s. 6d.
Bratsberg, 32s. 6d.	60 Frontino, 15s. 6d.	100 Old Shepherds, 11s.
Callao Bis, 8s. 9d.	5 Great Laxey, 10s.	30 Organos, 13s. 9d.
Copiapu, £2 3/4.	40 Goginan, 8s. 6d.	25 Panulillo, £4 12s. 6d.
Colorado, 35s.	100 Home Mines Trust, 12s. 6d.	50 Polbrean, 30s.
Chile Gold, 3s. 9d.	60 Indian Glenrock, 3s 6d	65 Prince of Wales, 4s.
Colombian Hydraulic, 7s. 3d.	500 Kohinoor B, 2s. 9d.	75 Potosi (New), 12s.
Chontales, 3s. 6d.	20 Kapanga, 3s.	20 Richmond, £3 6s. 3d.
Cankim Bamoo, 2s. 6d.	30 Killfret, 7s. 9d.	50 Ruby, 12s.
Carn Camborne, 1s.	100 La Plata, 5s. 6d.	25 Roman Gravels, £3 3/4
Devon Consols., £2 17 6	20 Leadhills, 35s.	100 South Caradon, 17s. 6d
Eberhard, 4s. 6d.	100 Lisbon-Berlyn, 14s.	25 Trevaunance, £2
East Blue Hills, 6s.	75 Montana, £2 3/4.	20 U. Mexican, £3 6s. 3d.
East Caradon, 10s.	100 Mounts Bay, 2s.	50 West Godolphin, 25s.
East Lovell, 10s.	10 Miners, 10s.	15 West Kitty, £11 1/4 xd.
East Wheel Rose, 9s.	150 Nouveau Monde, 2s. 3d	40 Wheal Orebor, 29s.

\* The present is a most favourable opportunity for investing in SOUND MINING SECURITIES, a judicious purchase of which at the low prices now ruling will, in all probability, result in large profits within the next few months.

**SPECIAL BUSINESS, at close prices, in the SHARES of all the principal HOME and FOREIGN MINES.**

**WILLIAM HENRY BUMPUS, SWORN BROKER.**  
OFFICES: 44, THREADNEEDLE STREET, LONDON, E.C.  
ESTABLISHED 1867.  
[In direct telegraphic communication with the Stock Exchange.]

**BRITISH AND FOREIGN MINING OFFICES.**

**MESSRS. PETER WATSON AND CO.,**  
18, AUSTIN FRIARS,  
OLD BROAD STREET, LONDON, E.C.  
BANKERS: THE ALLIANCE BANK (Limited).

**MESSRS. PETER WATSON AND CO.'S**  
BRITISH AND FOREIGN MONTHLY MINING NEWS—STOCK AND SHARE INVESTMENT NOTES—MINES, MINERALS, AND METAL MARKETS—SHARE LIST, No. 885, Vol. XVII., for AUGUST month, will shortly be ready, and will be sent to customers on application.

Annual Subscription..... 5s. | Single Copy..... 6d.

**MR. ALFRED E. COOKE,**  
BRITISH AND FOREIGN STOCK AND SHARE DEALER,  
9, OLD BROAD STREET, LONDON.

ESTABLISHED 1858.  
(Opposite the Stock Exchange, with which his offices are in DIRECT TELEGRAPHIC COMMUNICATION.)

RAILWAY STOCKS bought and sold at net prices free of commission. FOREIGN STOCKS bought and sold at net prices free of commission. SAFE INVESTMENTS effected to yield from 3 per cent. per annum and upwards.

MINING SHARES dealt in at close net prices. SPECULATIVE ACCOUNTS opened in Railway, Foreign, and American Stocks for the Fortnightly Settlement on receipt of cover.

SHARES SUPPLIED for forward delivery on payment of deposit. Mr. ALFRED E. COOKE can SELL the following shares, or any smaller marketable number at prices affixed FREE OF COMMISSION:—

50 Asia Minor, 5s.	50 East Wheel Rose, 9s.	100 Potosi, 10s.
Akankoo, 17s. 6d. paid, 9s.	20 Ecton, 20s.	100 Parys Copper, 1s.
85 Almaden, 5s. 3d.	10 Flagstaff, 1s.	50 Potosi, 10s.
50 Balkis, 15s.	20 Frongoch, 9s.	50 Prince of Wales, 4s 9d
20 Bedford United, 29s.	40 Frontino, 15s.	10 Rio Tinto, 10s.
40 Bratsberg, 30s.	100 Goginan, 10s.	50 Ruby, 12s. 6d.
100 Cankim Bamoo, 2s 6d	25 Gold Coast, 10s.	75 Rhodes Reef, 2s. 6d.
50 Carn Camborne, 1s.	25 Gunnslake (Clitters), 11s.	15 Richmond, £3 3/4
75 Callao Bis, 8s. 3d.	10s.	10 Roman Gravels, £3.
100 Chile Gold, 3s. 9d.	100 Hoover Hill, 4s. 6d.	22 Schwab's Gully, £3 3/4
50 Colombian Hydraulic, 7s. 3d.	80 Home Mines Trust, 12s. 6d.	20 South Caradon, 10s.
75 Consolidated, 10s.	50 Indian Consolidated, 2s.	30 South Darren, 10s.
100 California, 14s. 3d.	50 Indian Glenrock, 3s.	100 South Kitty, 10s.
60 Colorado, 35s.	100 Kongsberg, par.	5 ditto B.
50 Canada Copper, 4s 6d	100 La Plata (New), 5s 6 1/2	40 Transvaal Gold, 25s. 6
100 Chontales, 3s. 6d.	30 Last Chance, 1s.	15 Trevaunance, 10s.
100 Cor. South Australian, 10s.	20 Leadhills, £1 16s. 3d.	50 United Mexican, £3 3/4
250 Denver, 2s. 3d.	50 Lisbon-Berlyn, 13s 3d	70 Victoria Gold, 11s.
60 Devala Moyer, 4s.	100 Mounts Bay, 2s.	10 Van, £1 3/4
10 Devon Consols., £2 3/4.	25 Mysore Gold, 7s. 9d.	7 Wheal Agar, 10s.
75 Devon Friendship, 2s. 3d.	50 New Caradon, 1s. 6d.	10 Wheal Basset, 10s.
20 Devon United, 10s.	75 New Callao, 3s. 6d.	40 Wheal Silver, 10s.
3 Dolcoath, 10s.	60 New Emma, 7s. 9d.	50 West Caradon, 1s.
50 Don Pedro, 10s.	200 North Blue Hills, 1s.	100 West Orebor, 9s.
100 Drake's, 10s.	20 New Kitty, 2s.	75 West Polbrean, 5s.
40 Duchy Peru, 10s.	150 Nouveau Monde, 2s.	10 West Kitty, £10 10s.
50 East Blue Hills, 6s. 6d.	25 New West Caradon, 4s. 6d.	50 Wheal Coates, 3s.
25 Eberhard, 4s. 6d.	50 Old Shepherds, 10s.	25 Wheal Orebor, £1 3/4
30 East Caradon, 10s.	25 Organos, 12s.	40 Wheal Jane, 10s.
10 East Lovell, 10s.	15 Orita, 21s.	25 Wheal Kitty, 10s.
	100 Oscar, 15s.	

MANY OF THE ABOVE SHARES WILL BE SOLD FOR FORWARD DELIVERY (ONE, TWO, OR THREE MONTHS) ON DEPOSIT OF TEN OR TWENTY PER CENT.

Mr. COOKE has correspondents in every important city and town in England, whereby he can deal in Local Shares of every description.

Daily and Weekly Lists of Prices issued to clients on application. ADVANCES MADE ON STOCKS AND SHARES.

Letters and Telegrams receive immediate personal attention. BANKERS: ROYAL EXCHANGE (Limited), Cornhill, London.

**MR. JAMES STOCKER, STOCKBROKER,**  
2, CROWN COURT, THREADNEEDLE STREET, LONDON, E.C.  
ESTABLISHED 1851.

BANKERS: LONDON AND WESTMINSTER.

**JOHN RISLEY, STOCK AND SHARE BROKER,**  
AND MINING SHARE DEALER,  
38, CORNHILL, LONDON, E.C.  
ESTABLISHED 1860.

BANKERS: LONDON AND WESTMINSTER, Lothbury, E.C.

**MESSRS. ENDEAN AND CO., STOCK AND SHARE DEALERS,**  
85, GRACECHURCH STREET, LONDON, E.C.  
ESTABLISHED 1862.

BANKERS: LONDON AND WESTMINSTER, Lothbury, E.C.

**MESSRS. H. HALFORD AND CO.,**  
STOCK AND SHARE BROKERS,  
2, ROYAL EXCHANGE AVENUE, E.C.,  
Have BUSINESS in ECTON COMPANY SHARES.

SELLERS are requested to communicate with the above.

**MR. E. J. BARTLETT, STOCK AND SHARE DEALER,**  
30, GREAT ST. HELEN'S, LONDON, E.C.  
Selected List of Investments post free on application.

**JOHN LENN AND CO.'S CIRCULAR, POST FREE,**  
contains Highest, Lowest, Latest Prices of all Stocks and Shares, also shows the return per cent. at a glance.

**JOHN LENN AND CO.'S CIRCULAR, POST FREE.**  
The advice given in their former Circulars has enabled investors to make from 50 to 150 per cent. in a week.

**JOHN LENN AND CO.'S CIRCULAR, POST FREE,**  
contains special information respecting the safest investments obtainable, paying from 5 to 12 1/2 per cent.

**JOHN LENN AND CO. (LIMITED), STOCK AND SHARE DEALERS,**  
4 AND 5, GROCERS' HALL COURT, LONDON, E.C.

**JOHN B. REYNOLDS, STOCK AND SHARE DEALER,**  
37, WALBROOK, LONDON, E.C.  
Established Twenty-five Years.

BANKERS: LONDON JOINT-STOCK.

**POLBERRO, ST. AGNES.**  
The shares of this mine are in favour, and will advance probably to a very high figure. The mine has been inspected by gentlemen who are well known, and whose opinions are universally respected. Mr. REYNOLDS will be happy to furnish the particulars of their report, and to give to his correspondents any information in his power. The books of the company and all other particulars are open for inspection at the company's offices. The management is the same as that of West Kitty, and the property promises to be of a very high order. Mr. REYNOLDS directs attention to the fact that those who have purchased the shares can already obtain a fair profit. Mr. REYNOLDS further directs attention to the fact of his having been the first to introduce West Kitty, under very similar circumstances to those which now characterise Polberro, St. Agnes, and Mr. REYNOLDS with equal confidence recommends the latter company's shares. West Kitty, with at present 12s. per share paid, returns 30s. per share per annum as a minimum dividend with every prospect of further increase. When West Kitty shares had only 7s. per share paid they were at a premium of £2 each.

**FERDINAND R. KIRK, STOCKBROKER,**  
5, BIRCHIN LANE, LONDON, E.C.

SPECIAL BUSINESS in the following or any part:—

90 Akankoo, 11s. 6d.	150 Colombian, 8s.	40 Leadhills, 35s.
40 Alamillos, £1 1/4.	60 Colorado, £1 1/4.	60 Montana, £2.
50 Almaden, 5s.	100 Denver, 3s.	100 Mysore Gold, 9s. 6d.
50 Austral, £1 1/4.	40 Devon Consols, £2 3/4.	80 Old Shepherds, 9s. 6d.
40 Birdseye Creek, £1.	90 East Wheel Rose, 8s 6	60 Organos, 13s.
70 Bratsberg, £1 11s.	60 Frontino, 13s. 9d.	70 Orita, 19s.
100 Callao Bis, 9s.	50 Great Highway, £1.	50 Oscar Gold, 15s.
50 Carn Camborne, 7s 6d	60 Guinea Gold, 6s.	40 Transvaal, 22s.
140 Chile, 3s.	50 Home Mines Trust, 12s.	90 Victoria Gold, 9s. 6d.
120 Chontales, 4s.	60 Kapanga, 3s.	30 Wheal Orebor, £1 3/4.

Fortnightly accounts opened in Home Railways, Foreign Bonds, American and Canadian Railways, on receipt of the usual cover.

**MR. CHARLES THOMAS,**  
MINING AGENT AND ENGINEER,  
3, GREAT ST. HELEN'S, LONDON, E.C.

**MR. ALFRED THOMAS,**  
MINING ENGINEER, AND STOCK AND SHARE DEALER,  
10, COLEMAN STREET, LONDON E.C.

ESTABLISHED 1852.

**MR. HENRY J. TALENTIRE,**  
STOCK BROKER AND MINING SHARE DEALER.

SPECIAL BUSINESS in all Home and Foreign Mines at close prices. AUGUST CIRCULAR on application, containing valuable information and advice to investors, post free.

SHARES SOLD for forward delivery in one to three months upon usual deposit. OFFICES—21, THREADNEEDLE STREET, LONDON, E.C.

BANKERS: CITY BANK, Threadneedle-street, E.C.

**MR. J. GRANT MACLEAN,**  
SHAREBROKER AND IRONBROKER, STIRLING, N.B.,  
Refers to his Share Market Report on page 890 of to-day's Journal.

**MR. W. TREGELLAS, 40, BISHOPSGATE STREET WITHIN, E.C.**  
Deals in all descriptions of STOCKS and SHARES at close market prices.

**MR. W. B. COBB, 29, BISHOPSGATE STREET WITHIN, LONDON.**  
(Formerly secretary of the Malpas Gold Mine, now the Colombian Hydraulic Gold Mining Company (Limited), a successful mine.)

BANKERS—The ALLIANCE BANK (Limited), London.

Special information and business in all mines in the United States of Colombia—Tolima, Western Andes, Colombian, and other gold and silver mines in that country.

In direct communication each mail with the highest mining authority in Colombia, through whose private advice I am able to give most valuable information as to mines in the Tolima district, and other mines in the country. See Circular, price 1s.

**PROFITABLE INVESTMENTS.**  
TRUST MORTGAGE AND INVESTMENT COMPANIES  
PAYING FROM FIVE TO TEN PER CENT.

Further fall in the value of money. Reduction in the Bank rate. Reduction in the rates allowed on deposits.

FROM ABBOTT, PAGE, AND CO.'S SPECIAL ISSUE.  
STOCKBROKERS,  
42, POULTRY, LONDON, E.C.

Complete Copy, with Monthly (July) Circular, sent post free on application.

**MR. W. MARLBOROUGH, STOCK AND SHARE DEALER,**  
29, BISHOPSGATE STREET, LONDON, E.C. (Established 30 Years),  
Can SELL the following SHARES:—

75 Almaden, 4s. 9d.	30 East Rose, 8s.	10 Panulillo, £4 12s. 6d
20 Bratsberg, £1 11s. 3d.	40 Frontino, 13s. 6d.	100 Port Phillip, 2s.
25 California Gold, 15s 6	20 Great Highway, 1s.	35 Prince of Wales, 4s. 6
50 Callao Bis, 8s. 6d.	150 Kapanga, 3s. 9d.	25 Potosi, 10s. 3d.
50 Chile Gold, 3s. 9d.	10 Leadhills, £1 16s. 3d.	10 Roman Gravels, £3 3/4
100 Chontales, 3s. 6d.	40 La Plata, 4s.	20 Ruby, 12s. 6d.
60 Colombian, 7s. 3d.	50 Mounts Bay, 2s. 9d.	10 Richmond, £3 3/4
20 Colorado, £1 1/4.	5 Montana, £2 5s.	10 South Darren, 2s. 6d.
100 Cankim Bamoo, 2s 3	5 Mona, 15s.	10 Tolima A.
40 Devon Friendship, 2s	100 Nouveau Monde, 1s 9	10 Uni. Mexican, £2 7 6
5 Devonport and Tiver-	50 North Blue Hills, off.	60 Victoria, 10s. 6d.
ton Brewery, offer	wanted.	20 Wheal Orebor, £1 6s.
10 Devon Consols, £2 3/4.	20 Organos Gold, 12s.	20 Western Andes Gold.
	25 Old Shepherds, 9s.	24 15s.
	20 Oscar Gold, 15s.	

BUYER of 40 Orita, 50 East Blue Hills, 5 Tincroft.

PURCHASES FOR FORWARD DELIVERY AT SPECIAL PRICES ON RECEIPT OF DEPOSIT OF 20 PER CENT.

BANKERS: ALLIANCE BANK (Limited).

**HORACE J. TAYLOR,**  
(Seven Years Assistant-Secretary to the Port Phillip and Colonial Gold Mining Company (Limited).)  
39, GREAT ST. HELEN'S, LONDON, E.C.  
STOCK, MINING, AND MISCELLANEOUS DEALER.  
ESTABLISHED 1874.

BANKERS: CENTRAL BANK OF LONDON (Limited).

SPECIAL BUSINESS in the following:—

100 Akankoo, 9s. 6d.	50 Flagstaff, 1s.	50 Organos, 12s. 9d.
75 Bratsberg, 30s.	100 Frontino, 13s. 6d.	25 Panulillo, 92s. 6d.
200 Colombian Hydraulic, 7s. 3d.	100 Gunnslake (Clitters), 11s.	100 Potosi, 9s. 9d.
7s. 3d.	9s.	10 Ruby, 12s.
100 California Gold, 14s. 6	50 Home Mines Trust, 12s 3	10 Richmond, 65s.
50 Callao Bis, 8s. 6d.	20 Leadhills, 37s.	10 Roman Gravels, 63s.
75 Chile Gold, 3s. 9d.	100 La Plata, 4s.	50 South Devon, 5s.
60 Chontales, 3s. 9d.	100 Lisbon-Berlyn, 12s. 6d	20 United Mexican, 70s.
40 Colorado, 32s. 6d.	100 Marke	



## A PREFERENTIAL 12 PER CENT. HOME TRADE INVESTMENT.

The value of investments in smelting works is evidenced by the following:—

"THE CAPE COPPER COMPANY HAVE DECLARED A DIVIDEND AND BONUS AMOUNTING TOGETHER TO 30s. PER SHARE FOR THE QUARTER, BEING AT THE RATE OF 75 PER CENT. PER ANNUM."

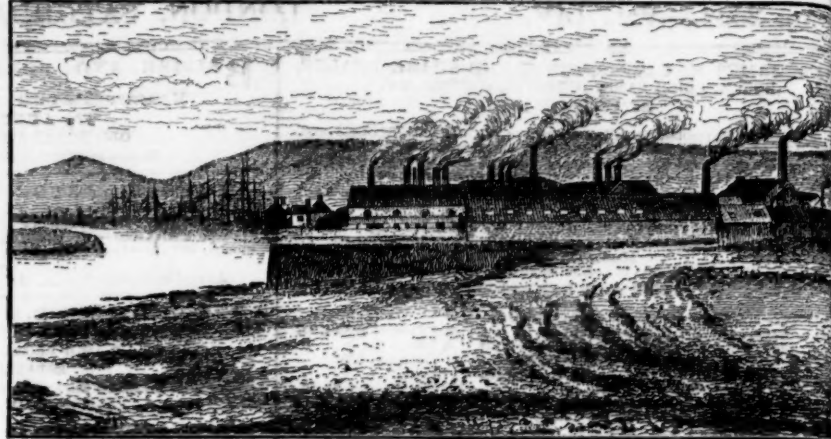
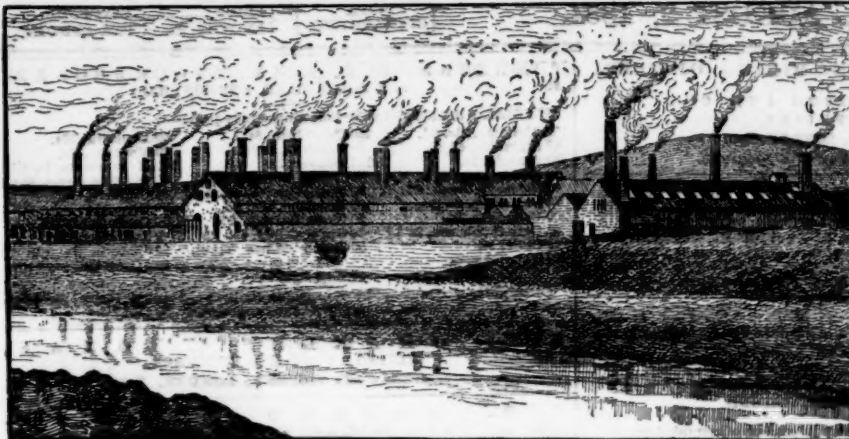
The Cape Copper Company, during the first year of its smelting operations near Neath (their furnaces being within a mile of the works of this company), and upon the smelting of only half their ore, obtained a profit equal to the total sum paid for the purchase of their works (see directors' report, June 27, 1881), and since they have smelted their own ores the shares have increased in value from £28 to £42-44 ex div. per share, the price on 5th July, 1884.

# The Neath Harbour Smelting and Rolling Works, Limited

(COPPER, SPELTER, AND ZINC.)

(Incorporated under the Companies Acts, 1862 to 1883, by which the liability of Shareholders is limited to the amount of their Shares.)

Formed to purchase and work the celebrated Crown Copper Smelting and Spelter Works, and the concession of the famous Gorno Calamine Mines, consisting of 398 hectares (about 800 English acres), situated in the province of Bergamo, Kingdom of Italy, and estimated to contain (without calculating new seams) 420,000 tons. A further concession has been obtained giving the right to explore over about 100 hectares of land.



CAPITAL £150,000, IN 30,000 SHARES OF £5 EACH.

DIVIDED INTO 20,000 PREFERENCE AND 10,000 DEFERRED SHARES.

ISSUE OF £100,000, IN 20,000 PREFERENCE SHARES OF £5 EACH,

BEARING INTEREST AT THE RATE OF 12 PER CENT. PER ANNUM.

Payments—2s. 6d. on Application; £1 2s. 6d. on Allotment; £1 5s. one month after Allotment; the balance as required.

Until the Preference Shares are called up in full the Deferred Shares, even when there are profits to justify it, shall only receive dividends on a sum equal to the amount called up for the time being upon the Preference Shares.

When dividends have been paid for five consecutive years on the Preference Shares at the rate of 12 per cent. per annum, and when the dividends upon the Deferred Shares have also been paid as above for a like amount and period, the distinction between the two classes of Shares as "Preference" and "Deferred" shall cease, and the dividends shall be thenceforth struck on both at the same rate per cent.

## DIRECTORS.

Sir JOSEPH N. MCKENNA, M.P., 67, Lancaster Gate, W.—CHAIRMAN.  
Sir WALTER BLOUNT, Bart., Dep.-Lieut. for Worcestershire, Brooke's Club, London.  
C. G. COLLETON RENNIE, Esq., 2, Morpeth Terrace, Victoria Street, S.W., and Carlton Club.  
Major C. J. BURGESS, Bexley, Kent, late Chief Executive Officer of the National Red Cross Society.  
SEPTIMUS F. PORTER, Esq., St. Margaret's, Twickenham, Director of the St. Michael's Gas Company (Limited).  
JOHN BENNETT, Esq., Waddon, Surrey, Director of the Minas Central Railway of Brazil (Limited).

The vendors will join the board after allotment.

BANKERS IN LONDON—Messrs. MARTIN and CO., 68, Lombard Street, E.C.

BANKERS IN WALES—The NATIONAL BANK OF WALES, Cardiff and Branches.

BROKER—JAMES URIE, Esq., 7, Tokenhouse Yard, London, E.C., and Stock Exchange.

SOLICITORS—Messrs. SUTTON and OMMANNEY, 3 and 4, Great Winchester Street, London.

AUDITORS—Messrs. CHATTERIS, NICHOLS, and ATKINS, Chartered Accountants, 1, Queen Victoria Street, London.

SECRETARY (pro tem.)—Mr. HENRY BAX.

OFFICES—CROWN COURT, OLD BROAD STREET (First Floor).

## PROSPECTUS.

2nd. By producing copper and spelter ingots direct from the ores.  
3rd. By converting the ingots into malleable copper and zinc by rolling.

The copper and zinc smelting works are, it will be seen, capable of a very large output, but the directors prefer to base their calculations upon a minimum trade; hence they have taken as their basis a working of 60 tons of copper and 100 tons of spelter or zinc per week, which it is estimated will yield the following results:—

1st. by working the calamine mines.  
Taking the estimated output of the calamine mines, upon the completion of works, as per report, at 40 tons per day only, or 12,000 tons per annum, the result should be as follows:—12,000 × £3 7s. 6d. (present price of calcined ore at Swansea) ..... £40,000  
Deduct cost of extraction of ore, calcination, and transport by land and sea to the works, at £2 16s. 7d. per ton for 50 per cent. ores ..... 33,950

Net profit on the calamine mines ..... £6,250  
2nd. By producing copper and spelter ingots direct from the ores.  
Produce of 60 tons of copper per week, at £53 (now selling 28th June, 1884, at from £53 to £60 10s.) per ton=60 tons×£53 × 52 weeks ..... £184,080  
Produce of 100 tons of spelter per week, &c., at £15 (now selling at Swansea £15 10s.) per ton=100 tons×£15×52 weeks ..... 78,000  
Value of produce sent to the rolling mills ..... £262,080  
Cost of producing per week for 52 weeks  
60 tons of copper ingots direct from average percentage ores, including trade expenses (say) at £34 per ton ..... 168,480  
Cost of producing per week for 52 weeks  
100 tons of spelter, taking 50 per cent. ores at £3 7s. per ton (say) £13 per ton of spelter ..... 67,600  
..... £236,080

Net profit on the smelting works ..... £26,000  
which gives an average profit of about £3 per ton on smelting; to this must be added the following important and material increase when the rolling mills are erected and in work.

3rd. By converting the ingots into malleable copper and zinc by rolling.

Rolling copper sheets, manufacturing yellow metals, tubes, flat bottoms, &c., at a profit (after deduction of working expenses) of (say) £3 10s. per ton = £3 10s. × 60 tons × 52 weeks ..... £10,920  
Rolling spelter into zinc sheets, &c., at a profit (after deducting working expenses) of (say) £1 10s. per ton = 30s. × 100 tons × 52 weeks ..... 7,800

Net profit on rolling mills ..... £18,720

SUMMARY OF ESTIMATED PROFITS.  
1. From the calamine mines ..... £6,250 per annum  
2. From the smelting works ..... 26,000 "  
3. From the rolling mills ..... 18,720 "

Gross profit ..... £50,970  
Deduct interest on preference shares at 12 per cent. .... £12,000  
Deduct expenses of management, salaries, &c. (say) ..... 3,500  
Deduct ground rental (less rent of cottages) (say), £100 ..... 395  
..... £15,895

Annual net profit after payment of 12 per cent. upon the preference shares ..... £35,075

or after the payment of the preferential dividend of 12 per cent. showing a surplus of £35,075, sufficient to pay the dividend of 12 per cent. upon the deferred shares, a further dividend of 12 per cent. upon the preference and deferred shares of the company, and leave a large surplus (some £11,000 a year) available for dividend, reserve fund, sinking fund, or otherwise for the benefit of the shareholders.

Special attention is directed to the following facts:—

1.—That the total which the company will have to pay for both the copper and spelter works, and the interest in the calamine mines is £35,000 in cash (of which £15,000 may be left on mortgage at 6 per cent.), and 10,000 fully-paid-up deferred shares of £5 each, which the vendors have agreed to take in proof of their confidence in the estimate of profits.

2.—That Messrs. Horne and Eversfield, in their report on the copper and spelter works alone, estimated that "not far short of £100,000 must have been expended upon the works," and that Mr. F. Bennett, C.E., places a present value on the property of "£110,000, exclusive of 20 acres of land suitable for building purposes."

The following agreements have been entered into:—(1) dated the 25th day of June, 1884, between Alexandro Milesi and James Humby; (2) dated the 19th day of July, 1884, between James Humby and J. Pocock Hall; (3) dated the 22nd day of July, 1884, between J. Pocock Hall and Henry Bax, on behalf of the company; (4) dated the 22nd of July, 1884, between James Humby and Henry Bax, on behalf of the company. The vendor of the Crown Copper Works has agreed to defray all the preliminary expenses of the company (except brokerage) up to and inclusive of the allotment of shares.

The above agreements, the reports, and the concession, copies of the lease, of the Memorandum and Articles of Association, can be inspected at the offices of the solicitors of the company during the advertisement of this prospectus, between the hours of 11 and 3.

In the event of no allotment the deposit will be returned without deduction. If a smaller number of shares be allotted than applied for the surplus deposits will be credited towards the amount payable on allotment.

Application will be made in due time to the Committee of the Stock Exchange for a settlement and quotation.  
28th July, 1884.

THE NEATH HARBOUR SMELTING AND ROLLING WORKS (LIMITED).

(COPPER, SPELTER, AND ZINC.)

FORM OF APPLICATION FOR SHARES.

To the Directors of the Neath Harbour Smelting and Rolling Works (Limited).

GENTLEMEN,—Having paid to your bankers pounds shillings, being a deposit of 2s. 6d. per share for of the above shares of £5 each, I request that you will appropriate and allot to me that number, and I hereby agree to accept the same or any smaller amount that may be appropriated and allotted to me, and to pay the amount according to the terms of your prospectus dated the 28th July, 1884.

Name in full .....

Address .....

Description .....

Signature .....

Date .....1884.  
The Form of Application can be copied and forwarded entire, with cheque or cash of 2s. 6d. per share, either to Messrs. MARTIN and Co., Bankers, 68, Lombard-street, London; to the National Bank of Wales, Cardiff, and its branches; or to the Secretary, Crown-court, Old Broad-street, London.

The works to be acquired by this company are admirably placed for easy and cheap transport, having a harbour frontage of 1038 ft. in the centre of the quay of Neath Harbour (the recent enlargements of which, now fast approaching completion, have been made at a large expenditure, and will give a floating dock area of 64 acres); at this quay vessels of large tonnage can discharge ore direct into the works, thus avoiding the great expense incident to trans-shipment and lighterage incurred by nearly all the other smelting-works in the kingdom.

In addition to the valuable dock frontage the works are intersected by the Great Western Railway and by the Tennants Canal, both of which communicate with the New East Dock, Swansea. Neath Harbour possesses also complete connections with the Great Western Railway, the Neath and Brecon Railway, and the South Wales Mineral Railway.

The coal used in the smelting operations is obtained from a colliery immediately adjoining, and is delivered direct into the works over self-acting inclines, thus effecting a great saving in carriage.

The extensive Crown Copper Smelting Works, and the Spelter and Zinc Works, situated at Neath Abbey, near Swansea, consist of 28 calcining, 18 reverberatory, 2 refining, and 24 spelter furnaces, together with the pottery works, drying-floors, a manager's residence, and workmen's houses, &c.

Messrs. Horne, Eversfield, and Co., having surveyed the works, estimated that not far short of £100,000 had been expended on them, and thought that 20 per cent. was a fair deduction, thus leaving their estimated value in 1881 at about £80,000. Since this valuation was made the Neath Harbour Commissioners have so enlarged the docks as to enormously increase the value of these works, so that the above figures denote a very moderate estimate, being £30,000 less than Mr. F. Bennett, C.E., estimates the present value of the property.

The works, and about 33 acres of land, are held under a lease of which 43 years are unexpired, at a ground rental of £495 per annum. There is ample space for extension of the works beyond those improvements now in contemplation.

The works are, as will be seen by Mr. Bennett's report, at present capable of turning out 10,000 to 20,000 tons per annum, according to the percentage of ores treated.

The directors propose to erect a complete set of rolling-mills, with all the necessary appliances of the best description, which, when erected, will enable this company to earn greatly enhanced profits.

Spelter, or unwrought zinc, is largely used in the form of sheet-zinc and for galvanising iron, also for the purpose of manufacturing yellow metal, brass, &c. The large consumption of spelter is evidenced by the following paragraph taken from the prospectus of the English Crown Spelter Company (Limited), 1883:—

"It is beyond the capacity of all the spelter works in England and Wales to supply the quantity consumed."

Arrangements have been made by which this company will secure the Gorno Calamine Mines in Italy, situate within reach of the port of Genoa, whence the ore can be shipped direct to, and unloaded at, the company's works at Neath Harbour, at a cost of £2 16s. 7d. per ton. This amount is the actual result of a year's working of adjoining mines owned by the English Crown Spelter Company (Limited).

These valuable mines are reported to contain a number of seams of ore of great value and richness, and by analysis give a medium of 45 per cent. of zinc; 10 tons sent away as a sample to the French Zinc Company producing after calcination 60 per cent. of zinc. The ores are divided into carbonates, silicates, and hydrates, easily treated. (See report.)

The value and great commercial importance to the company of possessing these mines, and being thus in a position to command a constant supply of ores, cannot be over estimated, and it will be seen by the reports of Mons. De la Souchère, and of Mr. John Lean (specially sent to Italy to report on the mines) that no pains have been spared to obtain the fullest and closest information of their value.

The directors propose that the shareholders shall enjoy three profits: 1st. By working the company's calamine mines.



## Registration of New Companies.

The following joint-stock companies have been duly registered:—

**THE SUN PORTLAND CEMENT COMPANY (Limited).**—Capital 50,000*l.*, in shares of 5*l.*. Manufacturers and dealers in Portland cement, and other kinds of cements and like compositions, in connection with certain patents. The subscribers (who take one share each) are—W. Boundy, 101, Leadenhall-street; R. Henderson, 57, Racechurch-street; H. Paulson, 23, Leadenhall-street; J. F. Morrow, 23, Leadenhall-street; J. C. Farquharson, 12, Ampton-street; J. H. Cowper, 101, Leadenhall-street; F. J. Philpot, Barnsbury.

**THE ALBERT MILL SPINNING COMPANY (Limited).**—Capital 50,000*l.*, in shares of 5*l.*. To acquire a mill at Farnworth, Lancashire, and to carry on the business of cotton spinners and manufacturers, &c. The subscribers (who take one share each) are—J. Perry, Bolton; J. Southworth, Clitheroe; T. Mangnall, Bolton; W. Gregson, Manchester; B. Topp, Bolton; E. Bradbury, Bolton; J. W. Dawson, Harlesden.

**THE CAMBRIAN MINING COMPANY (Limited).**—Capital 100,000*l.*, in shares of 2*l.*. To acquire certain mines situated in the county of Cardigan, together with machinery, plant, tools, and other effects hereto appertaining, for the purpose of working and developing said property, and to crush, smelt, or otherwise render marketable ore or other produce. The subscribers (who take one share each) are—E. Mansell, Tottenham, shareholder; W. Wrenn, Chadwell Heath, stockbroker; C. Hyde, 1, Cuthill-road, publisher; S. H. Kinso, 5, Great Winchester-street, stock and share dealer; J. Campbell, East Dulwich, gentleman; H. Chapman, West Enfield, stock and share dealer; C. Gregory, 81, Bishopsgate-street Within, solicitor. The subscribers have power to appoint the directors, whose number must not be less than three, or more than seven.

**DAVIS AND TIMMINS (Limited).**—Capital 10,000*l.*, in shares of 10*l.*. The general business of engineers, metal stampers, and merchants, &c. The subscribers are—W. Timmins, 10, Soho-square, 200; J. T. Timmins, 10, Soho-square, 20; R. Muir, 12, Soho-square, 100; G. J. Thost, 33, Northampton-road, 5; G. W. Ind, Barnsbury, 3; H. W. Inow, 63, Seven Sisters-road, 5; E. W. Cherry, Wardrobe Chambers, 5.

**THE OUSBY MINING COMPANY (Limited).**—Capital 10,000*l.*, in shares of 10*l.*. To acquire all the estate, term, and interest of the Linal and Ousby Iron Ore Company (Limited) in Cumberland, with the various powers relating thereto. To work and fully develop such property, and to carry on generally the businesses of miners, metal extractors, smelters, chemical manufacturers, and brokers and dealers in minerals, ores, metals, chemicals, and any combinations, &c. The subscribers (who take one share each) are—J. Russell, Newcastle-upon-Tyne, surgeon; A. Wood, Newcastle-upon-Tyne, wine merchant; T. W. Crawhall, Newcastle-upon-Tyne, merchant; D. Jackson, Hexham, surgeon; D. Stewart, Hexham, surgeon; J. Thompson, Newcastle-upon-Tyne, engineer; T. Thompson, Dunston, gentleman.

**ELLIOTT'S MINING PICK COMPANY (Limited).**—Capital 5000*l.*, in shares of 5*l.*. To acquire, use, vend, or deal in a patent relating to improved picks for mining and other purposes. The subscribers (who take one share each) are—A. Wimpory, Altrincham; J. Spurge, Altrincham; W. Fincken, Barnsley; W. R. Lee, Manchester; J. Higson, Manchester; L. H. Birch, Manchester; J. Paterson, Old Trafford.

**THE SOUTH AMERICAN SMELTING COMPANY (Limited).**—Capital 200,000*l.*, in shares of 5*l.*. To acquire ores, pyrites, minerals, and mineral products, obtained from any gold or other mines, and to carry on the business of smelters, reducers, crushers, &c. The subscribers (who take one share each) are—G. B. Hloyrd, Weybridge; T. Young, 38, Porchester-terrace; W. G. Gibbon, 5 and 6, Great Winchester-street; A. K. Huntington, Hampstead; A. H. Koch, 107, Philbeach Gardens; A. K. Phillips, 4, Weymouth-street; E. C. Koch, 88, Threadneedle-street.

**WHITE AND COMPANY (Limited).**—Capital 8000*l.*, in shares of 10*l.*. To purchase and continue an upholstery, cabinet-making, and general furnishing business, established at Shrewsbury. The subscribers are—J. P. White, Shrewsbury, 230; W. Blackmore, Shrewsbury, 70; T. H. Wignett, Shrewsbury, 5; H. Franklin, Shrewsbury, 10; E. Bunney, Shrewsbury, 1; W. Field, Shrewsbury, 10; W. H. Spaul, Shrewsbury, 10.

**THE PATENT ANTHRACITE FUEL, COKE, AND COAL COMPANY (Limited).**—Capital 150,000*l.*, in shares of 100*l.*. To manufacture and deal in patent and other fuel, coke, &c., in England, Ireland, or Scotland. The subscribers (who take one share each) are—J. C. E. Weigall, 32, Fenchurch-street; J. P. Perry, Paris; J. de A. Portugal, Paris; J. Oise, Nice; C. D. Hamilton, Guernsey; J. W. Holland, Old Ford; R. Howlett, 493, Commercial-road; R. J. Bainbridge, Guernsey.

**THE BRITISH GUANA GOLD ESTATES AND TIMBER SYNDICATE (Limited).**—Capital 5000*l.*, in shares of 5*l.*. To purchase or otherwise acquire mines and mineral properties, lands, hereditaments, tenements, &c., in said colony or elsewhere, and to search for, dig, sink, raise, win, get, and make merchantable and sell gold and other ores, metals, substances, and precious stones. To plant and cultivate any property, cutting down timber, selling same, &c. The subscribers (who take one share each) are—W. Rowsell, 77, Gracechurch-street, shareholder; J. Day, Uxbridge-road, merchant; J. Pottinger, St. John's, surveyor; H. Williams, Brixton, clerk; J. H. Bland, 75, Blackfriars-road, electrical engineer; C. Hooke, Dulwich, agent; A. D. L'Etang, 16, Albemarle-street, colonel. No Articles of Association have been registered.

**THE MEESBROOK PARK ESTATE (Limited).**—Capital 50,000*l.*, in shares of 10*l.*. To acquire a property for building and other purposes, comprising 133 acres, situated in the parish of Norton, Derbyshire, and near Sheffield. The subscribers (who take one share each) are—J. Easton, 155, Regent-street; K. Powis, 5, Guildhall Chambers; A. J. Rose, Shepherd's Bush; A. F. Benning, 64, Lincoln's Inn-fields; W. Woodgate, Highgate; R. Broford, 10, Woronzow-road; G. Whitehouse, 11, Queen Victoria-street.

**THE INDO-EUROPEAN (LONDON AND BOMBAY) RAILWAYS COMPANY (Limited).**—Capital 10,000,000*l.*, in shares of 20*l.*. To build, construct, lay down, equip, maintain, and work railways commencing near Tangiers, passing through Algeria, the Regencies of Tunis and Tripoli, Egypt, Turkey in Asia, Persia, the system finishing at Kurrachee, in British India. The subscribers (who take one share each) are—G. Davis, 80, Coleman-street; S. Cooker, 46, Southampton Buildings; H. J. Newell, 43, Camberwell-New-road; H. B. Worrell, 80, Coleman-street; E. T. Collis, 70, Cloudestley-road; H. A. Henderson, 91, Edgware-road; R. S. Tomlin, 3, Poets' Corner.

**THE INDIAN MINERALS: THEIR NAMES AND THE PROPERTIES ATTRIBUTED TO THEM.**—Our information concerning the opinions which the Hindus held about minerals and their properties has, says the Athenaeum, hitherto been so scanty that we thankfully welcome the valuable contribution to our knowledge of the subject which Dr. Garbe has presented to us in the book under notice—"Die Indischen Mineralien: ihre Namen und die ihnen zugeschriebenen Kräfte. Herausgegeben von Dr. R. GARBE. Leipzig: Hirzel. It is characteristic of the ideas of the Hindus about minerals that they should have treated them under the head of medicine. In fact, the Sanskrit text, edited, translated, and explained by Prof. Garbe forms part of a medical dictionary, the "Rājanighaṇṭa" by the Kashmirian physician Narahari, who, as Prof. Garbe shows, lived about six and a half centuries ago. Though we must not therefore expect that the notices by Sanskrit writers about minerals should be conceived in a scientific spirit, still they are interesting from an historical point of view, and we cannot but agree with the editor when he says in the preface—"Whoever takes an interest in the history of the sciences with which this subject is concerned, and is not accustomed to sneer at what former times and distant countries have pondered and taught on these things, will admit that the publication of this treatise was desirable not merely on philological grounds." For we learn from it besides to what uses minerals were turned in India, what properties

and powers were held to be inherent in them, what effects and influences upon the human body were attributed to them, Critical and explanatory notes and full indices greatly enhance the value of this unpretending volume.

## Meetings of Public Companies.

## TREVAUNANCE UNITED MINES.

The four-monthly meeting of shareholders was held at Paull's Hotel, St. Agnes, Cornwall, on Tuesday,

Mr. JOHN B. REYNOLDS in the chair.

Mr. W. JOHN REYNOLDS (the secretary) read the notice calling the meeting.

The subjoined report of Capt. Vivian was read.—The statement of accounts, showing a balance at the bankers of 446*l.* 9s. 3d., with no liabilities due and unpaid, was read.

July 28.—Since the meeting held on March 25 last we have continued driving the 55, east on the copper lode. We have opened about 15 fms. on the course of the lode, worth from 15*l.* to 20*l.* per fathom for the whole length driven. We have cleared an old shaft, which I find to be 30 fms. deep, and we have commenced to sink the same by nine men, at 12*l.* per fathom. I intend this for an engine-shaft. The copper lode is about 30 fms. south of this shaft, underlying north towards the shaft. I consider the shaft will take the lode about 40 fms. below the old level. I purpose, in the course of sinking, to intersect the lode by short cross-cuts. I consider our chances of success here to be of more than an ordinary character. I hope to hole the shaft to our present workings in about three months, which will give us ventilation, when we can work more extensively; and I have no doubt but that good returns of copper will be the result, which will assist very much in the erection of an engine. I propose to commence at once the preparatory work for an engine.—Wm. VIVIAN.

The CHAIRMAN said: Now, gentlemen, that report looks like business, but it is no more than I expected. I have always, as you know, held out good hopes to you concerning this property, and nothing which is now transpiring in the least degree surprises me. I believe there is a capital future before Trevaunance. This rich copper-lode which has been discovered is in itself now what we expect in the future—that is to say, we believe it is the forerunner of a great deposit of tin; and that is Capt. Vivian's opinion, I know. If it will give the shareholders any encouragement, I may tell them that the favourable opinion entertained by Captain Vivian concerning Trevaunance is entertained by every other agent to whom I have spoken about the property. Well now, gentlemen, you will see that the accounts are, as usual, clear, and I think satisfactory. We have a considerable balance in hand, 446*l.* about, and we thought that perhaps to-day it might be advisable to make a call to purchase an engine, but Captain Vivian says that if the engine were purchased he should not be able to do anything with it, and suggests instead of preparing for the outlay to-day we should prepare for it at the next general meeting of shareholders. For myself I may say that I am rather undecided about it, and I should like to hear, and I should like you to hear, the opinion of Capt. Vivian upon the subject again. My own feeling is a somewhat better opinion, and my first conviction is that when we meet in four months' time things will be looking up in Cornwall, for I believe the turn of the tide is already observable, and I must say that I like to buy things when the markets are in a very dead state. You will see that my mind is not quite made up on the subject. I should not like to unduly influence the meeting; I would sooner leave it with the shareholders. The shareholders have plenty of money, and therefore it is a matter for them to decide whether they will buy the engine now or in four months' time. It has occurred to me that the next meeting we may have to provide for a deficiency in the working of the mine, and we have not to provide for any deficiency this morning. However, gentlemen, we shall be guided by our friend, Capt. Vivian, who has a practical miner has proved over and over again that his views are thoroughly sound. I do not know that there is anything else to which I need refer. There are no arrears of call you will observe, and no liabilities due and unpaid; altogether I cannot imagine a company in more favourable circumstances at this stage than Trevaunance Company is to-day. I am full of hope about it, and I do honestly believe that the time is not far distant when you will refer to my past statements and thank me for having made such strong observations upon the matter. I have now to move that the statement of accounts and the agent's report be received and adopted.—Mr. S. PAYNE (Exeter) seconded the motion, and said he should like to hear a few words from Capt. Vivian.

Capt. VIVIAN, in response to the call of the Chairman, said he would briefly refer to the question as to whether a call was necessary or not. They had cleared out the shaft, which he had hoped would be down to the old level, but he found it was not more than 30 fms. deep. They were now sinking the shaft. They had not commenced doing anything at the collar. They had cut it down from the top to the present bottom; but before they did that they would sink the shaft from the present bottom to the old level, which would ventilate the present workings and enable them to work away the copper (which had been discovered) whilst they were putting up the engine, and help to pay for it. He hoped to have that work done by next meeting, and the rubbish and stuff cleared away for building the engine-house. In the meantime he and Mr. Michell, their engineer, could look about for a suitable engine. If they made a call it must be for an engine. An engine such as they would require would cost 1000*l.* in order to work this mine properly. If they postponed the call till next time they would then be in a somewhat better position to decide the exact call that was necessary. Even if they made a call to-day they would not be in the slightest degree more forward as regards the working of the mine itself. They had cut the lode of copper ore, and had driven 15 fms. upon it, and it was worth 15*l.* to 20*l.* per fathom. How much copper there was to take away he could not tell. His opinion, and the opinion of Mr. Hitchens (who was a St. Agnes man), was that this copper lode was the forerunner of a great course of tin in depth. That lode had never been seen below the old level, but it was going down below everything that had been seen in the deep workings in Consols, and the Pink lode in the copper lode had been a rich lode, and had given in the past nearly 100,000*l.* of profit. Seeing this great course of copper ore, and taking everything into consideration, he really thought, after careful consideration, that they were about to have another rich West Kitty Mine repeated in Trevaunance United. He was sure the shareholders would like to hear what Mr. Hitchens had to say on the subject.

Mr. M. T. HITCHINS said he was exceedingly pleased to find that they had made such an important discovery of copper ore in Trevaunance. If the copper ore held it would be very good, but if the copper ore went out and the tin came in, they might calculate upon getting a very large bunch of tin, but whether they had copper or tin he really hoped, and trusted that Trevaunance would turn out to be a good and profitable mine.

Mr. Geo. BUDD said that with regard to the purchase of an engine there was such a thing as taking advantage of opportunities. As Mr. Reynolds had properly pointed out some months hence machinery might go up in the market, and supposing they made no call to-day and in the interim between this and next meeting the opportunity arose for purchasing an engine cheap, they would be in the position of not having the money with which to purchase it. What they might do would be to calculate upon getting a very large bunch of tin, but the committee could not do anything unless they were armed with capital and authorised to make the purchase should the opportunity present itself. If the opportunity were not taken advantage of they might have to pay more money for the engine.

Capt. VIVIAN: I have no objection to the money being raised, if you like, and if you think it advisable. There are engines to be bought with the money. I know three engines now for sale. It is entirely a matter for the shareholders to decide whether to make the call or not.

Mr. F. W. MICHELL said that a call were not made to-day at the next meeting they would have to provide for the purchase of machinery as well as for current expenses.

Mr. LENOX thought Capt. Vivian had put the matter very clearly before them. For his own part, he did not think there was much fear of machinery going up tremendously in price during the next four months; if it did it would be a good thing, because it would show that the mining industry of the country was improving.

Mr. J. J. COUZENS: Could you give us some idea, Captain Vivian, as to what the returns for the next four months will be?

Capt. VIVIAN: They will be very little indeed, as it will take three months to get the shaft down. The ore is in the 10*l.* fm. level, and we have no ventilation until we get the shaft down. We shall be ready next meeting to commence the work of putting up an engine. If we make a call to-day we should make a call of 2s. per share; if not, at the next meeting you must make a call of 4s. per share.

Mr. F. W. MICHELL: It will take 2000*l.* to provide an engine and put it up properly.

Mr. S. PAYNE, of Exmouth, said he had spoken to some of the large shareholders, who agreed that a call should be made to-day to put up an engine. After hearing the discussion he should support a call of 2s. per share.

The resolution for the adoption of the accounts and the agent's report was then put and carried unanimously.

On the motion of Mr. S. PAYNE, seconded by Mr. GAIT, a call of 2s. per share was then made.

The CHAIRMAN said the next business was the election of the audit and finance committee. The present members were Mr. Robinson, Mr. Early, and himself (Mr. Reynolds), and the officers of the mine, and he would like the following gentlemen added:—Mr. G. Budd, Mr. Lennox, Mr. F. W. Michell, and Mr. Payne, of Exmouth.

Mr. J. J. COUZENS said he had great pleasure in moving the gentlemen named above constitute the audit and finance committee, with thanks to them for their services, and that the committee be empowered to treat during the coming year for the purchase of an engine.—Mr. MICHELL seconded the motion, which was put and carried.

The CHAIRMAN said that Mr. Bowden, the representative of Messrs. Williams, Williams, and Grylls, was present, and he was sure the shareholders would like to hear from that gentleman a few words of assurance that the financial business of the company was satisfactorily conducted.

Mr. BOWDEN: I have great pleasure in giving the assurance you ask me to do with respect to the financial working of the mine. The pass-book is on the table, and it gives a true record, as far as I am aware, of the whole financial arrangements at the mine. It has given me very great pleasure from time to time to carry out these arrangements as far as the banking part of the business is concerned. I have much pleasure in testifying to the perfectly straightforward and honourable way in which all the financial arrangements of this mine are carried out.

The CHAIRMAN said that Mr. Heard, of Truro, whose knowledge of Cornish mines and Cornish mining was well known in the county, was present, and he was sure the shareholders would like to hear a few words from that gentleman.

Mr. HEARD said it was a source of satisfaction that Mr. Reynolds and his friends had been the means of bringing into the county a large amount of capital, and that Mr. Reynolds had been the means of putting many friends

into a good mine—West Kitty. He trusted West Kitty might be a dividend mine for many years. Those who knew St. Agnes for 50 years, as he had done, could testify to the advantages arising from such a good mine; the benefits accruing therefrom could hardly be overestimated. He heartily congratulated the committee on the correct and clear way in which the accounts were laid before the shareholders. He said that if shareholders lost their money honestly, and with the knowledge that it had been judiciously and properly expended, as in connection with the mine in this office, they would have no cause for complaint, but he strongly condemned the system which had been pursued in some quarters of bringing money into the county on what he might call false pretences. If they had a better price for tin mines which were now partly closed would be able to pay their way and make good profits, as was now being done in West Kitty.

On the motion of Mr. LENOX, seconded by Mr. BOWDEN, a vote of thanks was passed to the Chairman, and the meeting closed.

## NEW KITTY MINE.

The four-monthly meeting of shareholders was held at Paull's Hotel, St. Agnes, Cornwall, on Tuesday,

Mr. JOHN B. REYNOLDS in the chair.

Mr. W. JOHN REYNOLDS (the secretary) read the notice calling the meeting. The agent's report which was read was as follows:—

July 28.—Engine-shaft: Since the meeting held on March 25 we have driven the cross-cut north of our former workings about 8 fms. not finding any more lode. We have resumed sinking west on the course of the lode before opened on. We have now opened on the lode west of cross-cut about 2 fms.; lode small and poor at present.—Thomas's Shaft: This shaft is now 15 fms. deep, and is sinking by nine men, at 22*l.* per fathom; lode about 2*l.* wide, of a very promising character, producing tin, copper, and munda, but not yet in paying quantities. I purpose to continue sinking the shaft 40 fms. below the old level, which will be reached in about two months, then to drive east with all speed over the rich courses of tin in West Kitty, and also towards the 20, 30, and 40 that have been driven to the boundary in Wheal Kitty, where I have been told they left off in good courses of tin. In the 20, driving east, the lode is about 2*l.* wide, improving in size and appearance as we advance.—Wm. VIVIAN.

The statement of accounts, showing a balance of cash at bankers of 6*l.* 3s. 6d., with no liabilities due and unpaid, was read.

The CHAIRMAN: Well, gentlemen, I will not weary you with observations at this meeting, seeing that I have said so much on previous occasions concerning the business of this company. I refer you to what I have said in the past, and it is well for some of the shareholders in New Kitty to keep themselves well posted up in the past history and present prospects of this piece of mineral ground. Of course, gentlemen, you who have been accustomed to prosecute mining know perfectly well that you may have to work a considerable time before you reach a profitable result, but you are encouraged to go on in the hope that you may meet with very good results after a much patience. Now it appears that in connection with New Kitty we have great reason for confidence, both because of the undoubted position of the mine in relation to West Kitty, and also to Wheal Kitty, and I think that this, as far as I can judge, is one of the most legitimate speculations which has ever come under my notice. I like to speak of mining as a speculation. The fact is, there is no certainty in anything in this world, as far as I can see, and perhaps mining may be termed the most uncertain enterprise, which we can possibly be engaged in, and, therefore, we shall be all the better off for being guarded in our speculations. But I hope the shareholders in this mine will not misunderstand what I mean by "guarded expressions." We used very guarded expressions in connection with West Kitty at one time, but we proceeded from step to step, amidst discouragements, to which you, the shareholders of New Kitty are total strangers, as Mr. Budd can testify. But we never gave up. I do not believe that you will have to go on very long—nothing so long as we did in West Kitty. I believe you will get your results before the expiration of such a long time, and I should not be at all surprised if you reach an unexpected success. Nothing which we can possibly do to advance the interests of this company will be left undone. With regard to the statement of accounts you will see that you have no liabilities due and unpaid, and you have no arrears of call. Now, gentlemen, you may by this time take all this as a matter of course, but you do not know the labour which is involved in bringing about this state of matters every four months, and I am bound to say the officials in London, as well as the officials here, show the greatest possible diligence, and they do this work as if their whole livelihood depended upon its being well done. I say that because I have not very much to do with the matter in London; it is done by clerks, and I am glad to give them that word of encouragement. I have much pleasure in moving that the statement of accounts, and the agent's report, be received and adopted.—Mr. LENOX seconded the resolution, and said he fully endorsed all that the Chairman had said with regard to the excellent prospect of this mine. He fully believed that by-and-by this would be a good dividend-paying mine.

Mr. J. J. COUZENS: Gentlemen, you all know my holding in New Kitty is very large, and I have repeatedly expressed my confidence in it that I need repeat what I have before said. But I should like to lay before you a statement with regard to the mine. As fellow adventurers in New Kitty, met together to-day to hear what has been done during the past quarter, and also what are our prospects for the future, it is wise and well for us to reconsider the reasons we have for embarking in this enterprise. If we have not good reasons for going into New Kitty we act very foolishly, and should have nothing to do with it. There are reasons, and very strong ones, to my mind, or I would never have touched it. I will soon tell you what they are. Many persons go into mining who know nothing about it. They buy mine shares purely as a speculation, and they have told me from time to time, hoping they will gain something by the transaction; whereas, instead of being well informed, they know nothing or next to nothing of the merits of the properties with which they connect themselves, or the character of the management. It is with them a sort of haphazard or matter of chance whether they win or lose. Such persons ought not to have anything to do with mining, on their own account or on the account of others. I believe mining to be a most legitimate field of enterprise (what would England be to-day without it, though it is under a cloud at present?) and I should be in every way fairly and honourably conducted in the development of the property and in its financial management. If I did not firmly believe this I would not touch it. Everything may and should be done above board. Where mines are well situated and efficiently managed and financed, there is no enterprise more lawful or that presents such opportunities of making money. I know that it is sadly abused, and brought into great disrepute through the action of some parties who care nothing for legitimate mining, whose only object is to bring out mines and get promotion money for them, or to put up the price of shares by puff advertisements, &c., to a high premium, and then to clear out with a large profit before anything, or, in fact, anything, is done in the way of proving or developing the property. We have seen a lot of this during the last three or four years in connection with home and foreign mines; many of them being utterly worthless, having already come to grief, and have brought on their promoters the odium of the public. Mining to-day is, I believe, suffering to a large extent from this, it having brought about a want of confidence on the part of those who have been accustomed to invest in mines, as well as having hopelessly sunk a large amount of capital that might have been usefully employed. I do not believe in mining after that fashion. People should be induced to go into mining, and try to do so, and go into mining intelligently. When mining is fairly and properly conducted, it is a benefit to all classes who have to do with it in the various districts where it is carried on. Some people speak very strongly against it altogether; but they would not if they knew more about it and if it were properly conducted, and not made, as it often is, the means of deceiving people, and a field for reckless and unprincipled speculation. I may say gambling in shares. The first thing is for a mine to be situated in a good and proved district, in proximity to good and proved mines, such as are well known in the Redruth, Camborne, and St. Agnes districts, and others that might be mentioned in other parts of the county and country. The next thing is for a mine to have a thoroughly practical, efficient, and honest manager, who understands his work and the work of those who are employed by him, and who will vigorously prosecute the development of the mine, and judiciously and economically purchase the various materials used on the mine, and see the shareholders' money is properly spent in its development; a man who will work the mine fairly for the whole body of shareholders, and not for party or market purposes, as has often been done. Now, it remains for us to consider how these principles apply to, and are in operation at New Kitty. Those who have studied New Kitty most will be most ready to admit that this mine is not only situated in a good and proved district, one of the best and richest in Cornwall, which has been worked for ages (probably from the time of the Roman conquest, or before), but in one of the very best parts of that district, and bounded on the north and south-east by those mines which have proved richest in the history of the district, such as Wheal and West Kitty, which latter mine is now opening out so rich, perhaps richer than any. New Kitty set is very large; the conformation of the ground is all that could be desired; it can be worked very cheaply; it has been noted for its rich deposits of mineral, and 40,000*l.* profit was made some years ago by one of the companies who worked comparatively small portion of it when it was called Old Polbreen, and when Wheal and West Kitty flat lode, that has proved so rich in these two mines, was not known to exist in either of them. New Kitty has this rich lode (besides others that were worked upon by the Old Polbreen Company) running through its entire length, as has been practically proved. Wheal Kitty has proved New Kitty eastward for many fathoms in depth, and West Kitty is now rapidly proving it to the north-west. New Kitty stands in just the same relation to Wheal Kitty as West Kitty did and does. I know it to be a fact that several of the upper levels at Wheal Kitty, from the 24 down to between the 50 and 60 fm. level, have proved to be very rich, and they are driven home to New Kitty boundary, and there is the tin standing exposed to the view of those who enter those levels, just as is the case in the lower levels in Wheal Kitty, which are also driven home to West Kitty boundary. So what can we expect in New Kitty but success sooner or later? A large tract of ground in the south-eastern part of our set is already proved for us by Wheal Kitty, and there is a splendid lode in West Kitty in some of the levels that are near New Kitty, and in one of the rises that is coming straight into New Kitty. I will not tell you its value; Capt. Vivian can, if he likes. I will only say it is good enough, and in New Kitty it can be worked more easily and cheaply than it can in West Kitty, it being nearer the surface, and the water charges so little. No purchase money has to be paid out of first profits, as was the case at West Kitty—35,000*l.* No man can have gone into this subject more deeply and thoroughly than I have. I have printed, and written, and spoken statements of and from the best mining experts and practical miners who have known the district for years, and worked in these three mines in particular, and I feel as confident as any man can that New Kitty will turn out to be a rich mine, and will prove a prize to those who can and will stick to it. You may depend upon it there is any quantity of tin get at it. This we are trying to do at Thomas's shaft, where we have a most promising lode; only depth is required, and we are nearly down to the point where it was found rich in Wheal Kitty. The thing is to press on the sinking of the shaft with the utmost speed possible, which Capt. Vivian is doing. Here, I believe, success is certain and near. Do not, therefore, in these depressed times let anyone frighten you out of your shares. Many of the knowing







FOREIGN MINES.

**ALFONSO.**—Alfred Rickard, July 31: Telegram: Mill run, 560 tons; yield (8400); smelter, 9500 (\$100,000).—**ALFONSO.**—G. Volvender, June 28: The working in No. 3 shaft has been favourably, the total depth up to yesterday being 185 ft. I have cut the hole reported in my last, and will continue sinking for a few feet more, and then I shall be compelled to make room for the lowering of the shaft. This will be a drift of several feet. The quartz taken out has visible and I can safely say you are now the possessors of a valuable lode, which requires opening up.

**ALFONSO.**—W. S. Welton, June 19: Run No. 104: We have up the upper portion of the sluice after a run of 542 hours, and obtained value at \$2685.75, which, with the purchased gold, makes the returns for month \$2833.73, the total expenses at the mine for the same period being \$5, leaving a profit of \$856.78—equal to 131¢. The low produce per hour with last run is entirely owing to the extreme hardness of the gravel and not to any falling off in the richness of the dirt. At several points gold has been seen in the gravel as it stands in the bank.—**ALFONSO.**—A piece of the lode has been put in the Plátilla ravine to run some gravel through which at has been the line of the new pipe. The quantity of gravel appears to be not working a considerable time. On the tracing I show a proposed line for working the Plátilla Mine, tailing directly into the Rio Lucio. This is to me to be the best means of working that portion of the property with the present sluice and outlet with the Plátilla tailings.—**ALFONSO.**—Lower Ditch: Since the tunnels collapsed on the 16th ultimo, a set of men have been employed at each tunnel securing and driving through slides, and it will take from six weeks to two months yet to finish the work of the tunnels.

**ALFONSO.**—Mr. Macrae: Report for week ending July 12 is as follows:—Since the last letter, dated July 5, good progress has been made in excavating the water, having reduced it 48 ft. It is now 4 ft. from the bottom of the 10th level, and by to-morrow morning we expect to reach the 10th plat. As at the back of the 10th level will be able to start work next week, shaft is being timbered anew; there being no traffic to hinder us, we have facilities for doing it. The mill has been running very well during the week, although the dirt has been poor. The wire tramway has carried down a ton of dirt, being a daily average of 23 tons. There is from 60 to 70 tons of dirt in the ore-house, which we shall start to put through on Monday (July 14).—**ALFONSO.**—Tributors' Pitches: The party who are running Rockwell's old on the Coin, commenced to jig their fine dirt on Thursday, and it appears on well. They pay a royalty of 25 per cent. The party who are running one of the old Brown stulls at surface also pay a royalty of 25 per cent. One dirt looks fair, but at present they have taken out very little. Another party are also running an old Brown stull, but their dirt looks poor. The usual royalty is 25 per cent. Dering and Co. are sinking a shaft on the Chelsea Beach from surface at 25 per cent. royalty. They are down to 1 to 2 in. rather low-grade ore, but looks promising. A shaft is also at work on this lode at surface on a small area of ground. There present 2 in. of ore showing.

**ALFONSO.**—The Silver Ore lode, F. McSweeney is breaking the back of the level, through which he drifted. In the early part of the week the streak of ore looks good, but it is not so rich as it was. On the 10th level the lode carries a very nice crevice for mineral. On the Gun-boat, east of the tunnel, a party have a regular streak of nice-looking ore, being about 3/4 ton to the fathom, and on same lode to west another party has the back of that level, which is looking promising. They pay the royalty of 25 per cent.—**ALFONSO.**—Shipments: During the week we have been sent 64 sacks of lead headings and 113 sacks of zinc headings; total weight, 1253 lbs., and the lessees have sent away during the same period 276 sacks of ore.

**ALFONSO.**—**INCORPORATION OF SOUTH AUSTRALIAN COPPER.**—Capt. Bryant, June 28: The lode in the bottom of the 60 south is worth 2 1/2 tons of copper per cubic fathom; lode in stope averaging 10 ft. wide. In blast- ing out side of level to lengthen this stope south we are breaking some excellent stuff, some of which is selected and bagged underground; present value of the stope carried, 8 ft., 5 tons 25 per cent. ore per fathom.—**ALFONSO.**—Same Level North: The stope south of diagonal winze is much the same as last reported, worth 2 1/2 tons 25 per cent. ore per fathom.—**ALFONSO.**—Level South: Stope in bottom of level near shaft has of late produced some good pockets of ore; present value of the stope carried, 8 ft., 5 tons 25 per cent. ore per fathom. The stope in the bottom of the level, north and south of winze, is worth 3 tons 25 per cent. ore per cubic fathom. The north end of stope shows for a short distance a good deposit of ore, and is doubtless a portion of the pipe of ore passed through in the winze, and it has every appearance of continuing (from its dip) to the point we are working out to lengthen the stope in the bottom of the 60, and if so this will be a valuable piece of ground; we are opening out this as fast as possible.—**ALFONSO.**—Machinery: Last week we cleaned No. 1 boiler crusher-engine, and have commenced cleaning No. 3 boiler winding-engine to-day. On Tuesday next we will have all the machinery in first-class working order. In consequence of the heavy rain, which has been wanted for a considerable time, and want of wood, owing to the continuous rain, during the last week our returns have diminished, but the stuff is accumulating underground and at surface, and as the roads dry up we hope to be able to crush without any delays, and we hope against we close the month our returns will show a fair profit, the same as in May; but owing to the overtime made, and other items, our cost may be proportionately higher when the reductions are taken into account. This is the first season that has been experienced for a considerable time in this part, which should have the effect of filling the springs, and make the water clearer, which has been of such a considerable drawback to us, a thing of importance. Everyone here is delighted with the season, and it is generally felt that there will be an abundance of feed, which will enable us to get as much wood as we require to compensate for our present difficulties.

**ALFONSO.**—**DENVER GOLD.**—F. S. Craven, July 14: In the 700 west, north vein, the smelter ore produced by three tributary veins in June has been sold; 34-56ths gold for \$425.25. In the 800 west, north vein, the drift is in 30 ft. east, and cross-cut, and is poor. There are 18 men stopping at different points between the 800 and 700 levels, and are breaking a crevice, which will average 2 ft. in width of fair ore. 62 tons of mill ore yielded in the six days ending July 11 24 1/2 tons gold; 4-56ths tons of smelter ore mined in June sold for \$285.36. In the 900 west, north vein, all work is now on the east side of the winze. In the upper part 30 ft. of stope, by five men, carry a strong crevice of good ore. The drift is in 12 ft. from the cross-cut, and is poor, as is the 12-ft. stope above it. The second 12-ft. stope is stopped now, the ore being below a paying grade. 75 tons ore yielded in mill 23-56ths gold. In the 900 west, north vein, only two tributary veins are now in this ground. Returns on 6 tons smelter ore, amounting to \$123.31, were received last week. In the 1350 west, main vein, the drift is in 469 ft. from shaft, and is tight and poor, as is the 6-ft. stope over it. Two men are working on pay ore west of winze, and four men east of it. The crevice in the upper part of the lift is 2 ft. wide, and good. Four tons of ore were last week yielded 2 1/2 ozs. gold; 2-56ths tons June smelter ore sold for \$277. The total receipts last week (six days) were 7 1/2 ozs. gold from 187 tons of ore mined in June.

**ALFONSO.**—**DEVALA MOYAR GOLD.**—Manager, July 4: At Salamon's reef we are busy clearing out the open cutting leading to the lower tunnel, and it will take us nearly a week more to put right the damage caused by the landslide. The winze has 50 ft. of water in it, but I cannot put it until I get the lower tunnel cleaned out. The 60 ft. level has been driven 4 ft.; the reef has been pinched, but it will doubtless come in again in a few feet. In the 140 ft. level the old reef is partly broken up, but we have come upon two new reefs about 1 ft. wide, carrying fair stuff, but I cannot judge of them fairly until we have driven further upon them. Good wood has been taken, as indicated by the returns from the tacho, but the bulk is low quality, and requires cheap treatment.

**ALFONSO.**—**NEW SHAFT (Gordon).**—Received on July 3 the first of timber, placed some 20 ft. on the slope below the point, which must eventually form the entrance, it being necessary to remove the superincumbent debris, and sink to this depth to reach virgin ground for starting our first back-lagging. The ground is favourable for our purpose, and if timber comes in as promised I hope to see good progress here; also in opening the adit level.

**ALFONSO.**—**REINHARDT.**—Frank Dyer, July 5: I have not measured up the distance run since my last report, but will include it in my next. I am pleased to say that our prospect is more favourable than in several weeks. In face of No. 2 drift, from 4000 ft. west, we have about 14 in. of quartz, and about the same in face of a drift I have started from the incline upraise. What it will amount to in other place we cannot say, were it not the fact that in times past we have made no favourable showing for ore I would feel elated over the present outlook. At 1000 ft. p. y. of the 2nd inst. one of the air-piston heads broke, which permitted no further running of the air-drills for the week. But my machinist immediately commenced the making of a new piston-head from an old casting that I procured from the mill. He is still at work upon it; it will take a few days yet to get all into running order again. The miners will continue driving by hand drills, while the compressor is being required, so our work is not at a standstill. I am doing all I can to push matters along, and will have the machinery running again as soon as possible.

**ALFONSO.**—**MOORE GOLD.**—B. D. Plummer, July 5: Mining Operations: Taylor's discharging the stamper from the re-ends in the mine to the bank at surface has been considerable satisfactory. The lode in Taylor's shaft, on the 10th level, below the 173, will yield 4 1/2 tons of ore per fathom; it is strong and promising-looking, and the assay value this week is 1 oz. 6 dwts. 7 grs. of fine gold per ton of rock. If the lode continues as good when we have opened out stopping ground there need not be no fear about it becoming profitable. Having practically treated the ore as we have done by stamping I am able to state with confidence as to the yield of gold, and we only now require to prove that the lode continues to hold. It affords me very considerable pleasure to be able to hold out to you this encouraging statement, especially after the many disappointments and failures on this field. There is nothing new at any other point to call for remark this week. The stamps continue to work very well.

**ALFONSO.**—**NEW CALLAO.**—The manager writes (June 28) that he was continuing to work on the Pinelli lode, although slowly, having been delayed some time by the breaking of a piston-rod, which at the same time knocked out the end of the shaft.

**ALFONSO.**—**NEW EMMA SILVER.**—G. Collins, July 14: The snow from In and around the works has entirely disappeared, and road is open. I am anxiously awaiting news. If anything is to be done this year work should commence not later than Aug. 1, as it will take balance of season to get fuel enough to run until spring again.

**ALFONSO.**—**NEW POTOTS.**—Manager, June 20: Atwood's Shaft: In consequence of the severe floods we had on May 23 to 26, we have not made as rapid progress as usual. No. 2 drift west has been driven 45 ft., the vein being small and poor. The timbered drift east is now 201 ft. from shaft. In the back of this level the stope yields payable quartz, with occasional patches and spots rich in gold. We have communicated the winze below No. 2 with No. 3 drift, and are now actively pushing this drift, and quite expect to report an improvement within

the next 20 ft. At present there are two pumps in this shaft, No. 5 and No. 11 Cameron. The new pump chamber below the No. 11 will be completed this week, and the No. 11 placed there, so that we can resume sinking the shaft, and at the same time be well prepared for emergencies.—**ALFONSO.**—No. 1 drift east has been driven 17 ft., being 23 ft. from shaft. The vein is improving eastward, but not yet in profitable quartz. No. 1 drift west is 36 ft. from shaft.—**ALFONSO.**—No. 2 drift east has been driven 25 ft. The vein continues much the same in quality as last reported, and is 4 ft. in width. We have a large amount of stopping ground here ready for the mill, and during the next 15 days a longer derick will be placed which will economise the handling, and enable us to have the quartz much faster with the same engine.—**ALFONSO.**—Timbering and securing: We have used during the month 1236 ft. round timber; 1021 ft. (3 in. and 4 in.); boards; 2825 ft. slab or acous. Several sets of timbers in air-shaft have also been replaced.—**ALFONSO.**—Surface Improvements (Mine): We hope to complete the two new derricks on Atwood's and Scriven's shafts during the coming month. These improvements will give us a hoisting capacity of 150 to 200 tons per day.—**ALFONSO.**—Milling Department: We have only been enabled to work 13 days during the month, the reason having been fully explained in my last letter; 397 tons of quartz have been milled in 13 days, yielding 1 1/2 ozs. per ton, or 468 ozs. of bar gold, which has forwarded on June 19. All the mill machinery is in good working order. We shall run 40 stamps in August, and we are completing such preparations as will enable us to run these without interruption. The new stone-breaker will also be fixed during the month.—**ALFONSO.**—Return of Gold: It is almost impossible to give any definite estimate of what our returns may be owing to the very buncy character of the veins. Last month we began splendidly, and got out 230 ozs. in eight days. If the rich shoot widens in depth it will materially increase our shipments for July and August. I quite anticipate we shall be able to meet our expenses in August, and judging from the present appearance of the mine I have every reason to hope that at the end of the year our returns will show a profit on working.—**ALFONSO.**—Finance: We have an indebtedness here chiefly for supplies of fuel and logs, and freights of machinery. You are aware that an increase of expenditure has been incurred with the idea of getting the enterprise to pay all expenses as soon as possible. This I hope now to do, so that with the present debit once wiped out we shall be able to meet all our costs with the gold remitted. I would also remind you of the extra freight of mill machinery, and the contract for clearing and marking the company's estate boundaries.—**ALFONSO.**—Health: The health of the staff has been fairly good, and during the month there have been no accidents. In conclusion, I would say that the reserves in the mine are increasing. The improved facilities for hauling in the mine and at surface will decrease the cost per ton of quartz, and at the end of the year will find us quite prepared to supply a 60-stamp mill.

**ALFONSO.**—**NEBUDDA COAL AND IRON.**—Coal Raisings for June: Output, 2387 tons 5 cwt. 1 qr. 22 lbs.; sales, 2171 tons 1 cwt. 1 qr. 22 lbs.; consumption, 216 tons 4 cwt.

**ALFONSO.**—**ORITA GOLD.**—W. S. Welton, June 19: Works: During the present week water will be turned into the Medina ditch, and allowed to run at the waste until the pipe is finished, which will season the ditch, and if there should be any point requiring strengthening the work can be done. The whole of the 18-in. pipe has been made, and we are now making the taper-pipe, receiving the water from the ditch. All the heavy castings have arrived at Orita, having been brought up on men's backs. Timber is being cut for the sluice and second bulk head.—**ALFONSO.**—Contract: As the work will shortly be completed I shall be glad if the board will kindly advise the arrangements they anticipate making for receiving the same. As soon as the pipe is finished I intend turning on the water and running the mill, to prevent any loss of time.

**ALFONSO.**—**ORGANOS GOLD.**—Mr. Mills, June 19: Orita Mine: Open-cut above Esperanza Level: The work done here from March 1 to May 20 consisted in removing an enormous fall of rock that took place on the former date, owing to the wet weather. On the evening of the latter date I commenced tramming mineral, and now have a good quantity down at the mill and on various passes. The lode is apparently rich, and provides abundance of mineral.—**ALFONSO.**—Esperanza Level: A few fathoms east of Choro cross-cut I have put some men to sink on the lode, which is rich on the sole of the level, in order to prove its continuance in depth. This work will be proceeded with as quickly as possible; but very good timbering will be required on the heavy nature of the ground. I do not expect a very great rate of progress.—**ALFONSO.**—Buena Ventura Level: On my arrival here men were at work clearing away a fall that had occurred between the mouth of the level and winze No. 1. This has been completed, fresh timber put in, and tramming proceeded with since May 20. No driving was done in this level during the month.—**ALFONSO.**—Rogers' Level: The cross-cut commenced by Mr. Green, which is intended to meet the winze put down from Buena Ventura level, has been continued in very hard ground, thus accounting for the slow progress made.—**ALFONSO.**—7 ft. 6 in. during the month. According to Mr. Green's survey the main 3 fms. of driftage to do, and then 5 1/2 fms. to rise in order to hole through. Mill has not been working, but to-morrow I intend re-commencing work with the 24 heads, and expect a good return of gold this month.

**ALFONSO.**—**TE ENCONTRE MINE:** Cross-Cut No. 1: A few days after my arrival on the 19th ult. we cut into what I believe to be the Te Encontre lode, that was formerly worked by a level 16 fms. above the present working, which level was stopped at the end of April, 1882. The lode is about 18 in. wide, consisting of carbonate of iron and pyrites, with a little quartz. I had the whole of the lode exposed in the cross-cut taken down, and there resulted about 3 tons of mineral, from which I took a fair sample. By assaying this I yielded 16 1/2 dwts. of gold per ton. I have put men to drive east and west on the lode, in order to prove whether it does or does not change into a lode, the mineral of which shall be amenable to amalgamation. Some distance above the old level mentioned in the preceding paragraph, the outcrop of a lode running south-west and north-east, dipping north, has been uncovered for about 10 fms. in length; this lode is on the surface from 2 ft. to 4 ft. in width. A fair sample of the lode gave, by fire assay, a yield of 1 oz. 7 dwts. of gold per ton, and as this mineral does not contain much pyrites, the lode could be extracted by amalgamation. I intend putting some men to cross-cut in order to prove it in depth.

**ALFONSO.**—**PESTARENA UNITED.**—Wm. Roberts, June 15: Pestarena Distrito No. 1 Lode: The 140 fm. end, driving north, still carries its regular size of lode, but of low grade ore, yielding 5 tons per fathom of 7 dwts. per ton. The 140 fm. end, driving south, carries a small vein of pyrites on the footwall, and yields 1 ton per fathom of 8 dwts. per ton. In the 130 fm. end, driving north, there is a lode 40 centimetres wide, well impregnated with pyrites, carrying a good flook on the hanging-wall, and has been easier for driving, and now yields 4 tons per fathom of 9 dwts. per ton. The 130 fm. end, driving south, is still advancing in hard rock, and carries a little ore on the eastern wall, but not enough to value. The intermediate drive south, above the 120 fm. level north, shows a good width of lode, and is opening out some fair stopping ground. The lode in the 110 fm. end, driving south, continues of its former size in the sole of the level, but is wedging out towards the back; it yields 1 ton per fathom of 9 dwts. per ton. In the cross-cut in the 110, west of No. 1 lode, good progress is being made, but nothing has been seen that calls for special remark.—**ALFONSO.**—No. 5 Lode: The 90 fm. end, driving north, is going forth in stratified rock, and carries a vein of quartz well charged with pyrites, yielding 1 ton per fathom of 7 dwts. per ton. The 90 fm. end, driving south, is advancing in strong gneiss rock, without ore, carrying a good divisional line, with a little flook on the same.

**ALFONSO.**—The 65 end, driving south, is in massive siliceous rock traversed with small strings of quartz carrying a little ore on the footwall, and yields 1 ton per fm. of 10 dwts. per ton. All the stopes continue to yield their usual quantity of ore. At Acquila Mine during the past week the old pumping-wheel has been taken out, which had been in a very weak state for some time. It has now been replaced with the new one, which is working well. This work has necessitated the suspension of the 140 for a short time owing to the water having risen to that level, but it is now in fork, and the men set to work again.

**ALFONSO.**—**H. J. Gifford, July 16:** Val Topa District: The cross-cut west from new lode, near end in the No. 1 level, is started at a point where the new lode ceased to be productive. The large quantity of water issuing from the rock at this point, and the generally unsettled character of the strata, seem to point to the existence of the ore in a branch in the cross-cut at No. 3 level west, under rise, owing to the hard, unprosperous nature of the rock, has been suspended. In the rise on the eastern branch the lode, which had become much smaller, has now opened out again, and shows some good solid pyrites, producing 5 tons per fathom at 10 dwts. per ton. The end southward No. 1 level, on the eastern branch, having passed the cross-course met with above, has now a large width of quartz, sparsely impregnated with pyrites, producing 10 tons per fathom at 7 dwts. per ton.

**ALFONSO.**—In the end north under No. 1 level on eastern branch the lode is very irregular, showing in the back a good width of quartz, whilst below there is only a small leader of pyrites interstratified with schist. It produces about 5 tons per fm. at 8 dwts. per ton. The rise in back on new lode in the No. 2 level is on a hard massive lode, with a fair quantity of pyrites, and produces 8 tons per fathom at 8 dwts. per ton. The end south in the intermediate level under Zero is getting into more kindly looking ground, and we shall soon be over the workings at No. 1 level on the eastern branch, when we hope to find an extension of the latter.

**ALFONSO.**—**ST. JOHN DEL REY.**—Telegram from Morro Velho, dated Rio de Janeiro, July 29: Produce nine days, second division of July, 6500 oits.; value, 2518¢; yield, 3 1/2 oits. per ton.

**ALFONSO.**—**RUBY AND DUNDERBERG CONSOLIDATED.**—July 5: Dunderberg: There are 20 tributaries at work. Nothing new to report. We have shipped 34 tons of ore this week.—**ALFONSO.**—Home Ticket: The bottom drift has been advanced only 3 ft. during the week; the reason for the slow progress is owing to an accident by which one of the contractors came very near losing his life. While ascending the ladder he made a false step and fell backwards, a distance of 50 ft., to the bottom of the shaft; it was supposed for several days that he was fatally injured, but he has now recovered and his partners have resumed work. Lord Byron: The tunnel has been advanced 9 ft. during the week; total, 35 ft. from the winze. The ore in No. 2 cave continues from 1 1/2 to 2 ft. thick by 4 ft. in width in the west branch of the cave, which lies nearly horizontal. The east branch of the cave, which is going down at an angle of about 45°, is now being cleared out; there is a good showing of ore on the west side or footwall, which has not been cut into yet, the object being to clear away the waste material for a further distance of about 20 ft. before extracting ore. A cross-cut has been run 3 1/2 ft. in order to make a room for a windlass at the end of the drift north of No. 2 cave; there still remains a few feet to sink to connect with the cave at the most convenient point to hoist through. Four tributaries and eight contractors are at work; the tributaries have about 12 tons of ore ready for shipment.

**ALFONSO.**—**TELEGRAM, July 29:** 32 tons ore shipped; 24 tons smelted, producing to company \$230.

**ALFONSO.**—**UNITED MEXICAN.**—Mr. Hay, Guanajuato, July 7: Mine of El Diamante: In the frente de Adela west the ore is of a fair class, but found only in small pockets. Last week 2 cargoes of it were remitted to Duran. In the pozo of San Andres no favourable change has taken place in this winze. Last week we resumed work in pozo No. 5 of San Andres; the lode is 50 centimetres wide, in fair ore. We also begun another No. 7 of San Andres from the level of the frente No. 10 of San Andres west; the ore is ramified over the lode, which is 60 centimetres wide. We sold in public sale last Thursday, the 3rd inst., about 251 cargoes for \$7612. We remitted to Duran last week 425 cargoes and sold 2 cargoes 9 arrabats and 12 lbs. of bonito, making together 779 cargoes of hacienda ore from San Cayetano, and counting the produce of El Diamante we have 783 cargoes of hacienda ore, yielded by the mine of the new concern.—**ALFONSO.**—In the frente de San Martin we have not yet found any ore in this end. Returns from the mine of San Cayetano de la Ovejera for the week ending July 5, \$10,310; outlay, \$4105. El Diamante returns, \$3432; outlay, \$443.

**ALFONSO.**—**UNITED MEXICAN.**—Mr. Hay, July 14: Mine of El Diamante: In the frente de Adela west the ore, of a fair class, continues to show itself in patches on the width of the lode, which measures 50 centimetres. Four cargoes have been sent to Duran last week. We have stopped the work in the pozo of San Antonio until the end we have opened allow us to work below. In the frente No. 1 of San Antonio west the lode is only 30 centimetres broad, and the ore discovered in a ramified state. In the frente No. 2 of San Antonio west the vein is 95 centimetres wide, all in ore of fair class, of which 20 cargoes were sent to Duran last week. We have abandoned, for the present, the working in the cross-cut to the alto of frente No. 2 of Santa Rosa west. In the pozo of San Ignacio we have found a narrow strip of ore, 40 centimetres broad, during last week. The extraction from the workings of El Diamante was therefore 24 cargoes.

**ALFONSO.**—**Mine of San Cayetano de la Ovejera:** In the frente No. 5 of San Juan west the ore is improving, particularly in the narrow strip of a width of 15 centimetres. In the frente No. 6 of San Juan west this end holed in the upper part of pozo No. 5 of San Juan three cargoes from this working were sold in last public sale for \$200. In the frente No. 6 of San Juan east the lode is now only 50 centimetres wide, but the ore continues to be good. In last Thursday's public sale five cargoes were sold for \$317. In pozo No. 7 of San Juan no work has been carried on since April 26. From a stope to rectify or making the walls of the winze straight we got 7 cargoes of ore, which were paid in rescate \$999. From the frente No. 10 of San Andres west we sold 3 cargoes for \$271. The frente No. 11 of San Andres is in ore of inferior class. In pozo No. 10 of San Andres the ore is improving; lode has a width of 1-80 metre. On July 10 we sold in public sale 3 1/2 cargoes for \$400. The pozo No. 2 of San Andres is in the same state as hitherto. In the pozo No. 7 of San Andres the lode has a breadth of 1-50 metre, and the class of ore has improved, and is more thick set than when we began the winze. On the 10th inst. we sold in public sale 388 cargoes for \$9097. During the week ending the 12th inst. we sent to Duran 446 cargoes, but I sold no bonito, as we had gathered only about 10 arrobas, which I kept until next Saturday. The extraction from the Mine of San Cayetano de la Ovejera was, therefore, 894 cargoes of hacienda ore, which, added to that of El Diamante, makes a total of 823 cargoes of hacienda ore from the mines of the new concern.—**ALFONSO.**—In the frente de San Martin we have driven a total of 123-90 metres. No ore having been found, we have begun a cross-cut to the adit, to look for another vein that must be close by. Returns from the Mine of San Cayetano de la Ovejera for the week ending July 12: \$11,002-36; outlay, \$3795-70. In El Diamante—Returns, \$154-02; outlay, \$368.

**ALFONSO.**—**WEST CALLAO.**—The manager writes, under date July 28, that he had commenced crushing, and everything worked very well, when he was obliged to suspend operations for two or three days to do some repairs to the framework of the crusher, which was cracked. He hoped to recommence crushing on the 30th ult. But for the delays experienced he would have had some 400 tons crushed.

breadth in both ends. From No. 6 of San Juan west 3 1/2 cargoes were sold in public sale for \$275, and from No. 6 of San Juan east 3 cargoes for \$312. Pozo No. 7 of San Juan has holed in frente No. 9 of San Andres west, therefore, no more ore to be got from this winze; however, in last week's public sale we sold 3 cargoes for \$211. In the frente No. 10 of San Andres west the lode is 70 centimetres broad, and contains little ore. Last Thursday we sold 1 1/2 cargoes for \$70. In frente No. 11 of San Andres west the ore is of a low ley. In frente No. 11 of San Andres east, here also there is of an inferior class. In No. 12 of San Andres, though we have no ore in this working we continue our advance to communicate with frente No. 10 of San Andres west, which is close by.

**ALFONSO.**—In pozo No. 1 of San Andres the width of the lode has decreased to 75 centimetres, but the quality of the ore has improved considerably. In pozo No. 1 of San Andres no favourable change has taken place in this winze. Last week we resumed work in pozo No. 5 of San Andres; the lode is 50 centimetres wide, in fair ore. We also begun another No. 7 of San Andres from the level of the frente No. 10 of San Andres west; the ore is ramified over the lode, which is 60 centimetres wide. We sold in public sale last Thursday, the 3rd inst., about 251 cargoes for \$7612. We remitted to Duran last week 425 cargoes and sold 2 cargoes 9 arrabats and 12 lbs. of bonito, making together 779 cargoes of hacienda ore from San Cayetano, and counting the produce of El Diamante we have 783 cargoes of hacienda ore, yielded by the mine of the new concern.—**ALFONSO.**—In the frente de San Martin we have not yet found any ore in this end. Returns from the mine of San Cayetano de la Ovejera for the week ending July 5, \$10,310; outlay, \$4105. El Diamante returns, \$3432; outlay, \$443.

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CONSETT IRON COMPANY.

This company having recently got a quotation on the London Stock Exchange, the subjoined will be of interest to many readers of the *Mining Journal*. The report for the past year has just been issued. It states that the profit for the year was \$5,631, and after meeting the interim dividend and extinguishing special expenditure on new offices and plate mills alterations a dividend of 11s. 6d. per share is recommended. The growing demand for steel plates caused the directors to give orders for the erection of six additional Siemens-Martin furnaces and other adjuncts. The following table, prepared by Mr. S. N. CHALLONER, of Newcastle-on-Tyne, shows the profits, dividends, and prices for the past 10 years:—

Profits for year ending June 30.	Dividends per share.	Price per share.	
		July 7.	Aug. 7.
1875.....£215,101	40/-	60/-	£24 1/2
1876.....86,257	20/-	40/-	24 1/2
1877.....83,288	7/6	15/-	18 1/2
1878.....57,996	5/-	13/9	18 1/2
1879.....55,995	5/-	10/-	16
1880.....104,497	7/6	22/6*	23 1/2
1881.....195,070	15/-	25/-	25 1/2
1882.....128,494	12/6	17/6	26 1/2
1883.....130,218	12/6	15/-	24 1/2
1884.....85,631	8/6	11/6	18

\* And 1/2 bonus share (2 1/2 lbs.), making with the dividend 32 lbs. 6 1/2 for the half-year. † Present price.

From 1874 to 1880 there was a reserve fund of 100,000, which, together with 38,000, taken from undivided profits, was in 1880 given to the shareholders in the proportion of one share, 7 1/2 lbs. paid up for every three shares held. The bonus share being worth 15 premium, the bonus was really equal to 7 1/2 lbs. instead of only 2 1/2 lbs. In 1876 and 1877, when the profits and price were about the same as at present, the share capital was only 422,145, and the loan account between 150,000, and 160,000, but now the share capital is 552,000, and the loan account 190,213.

Original Correspondence.

DON PEDRO GOLD MINING COMPANY.

Sir,—Finding that information is being forwarded to the shareholders by persons unconnected with the office, and that the name of the company is being used on such advices without authority, I take this opportunity of informing you that all reports will be regularly transmitted to the *Mining Journal* from this office, and that in order that you may know that they are official the documents will be signed by the secretary.

JOHN E. DAWSON, Secretary.

London, Aug. 1.

[ADVERTISEMENT.]

EAST LOVELL.

Sir,—As I fail to obtain a recent list of my co-partners in the above mine, with their addresses, may I through your widely-circulated Journal ask all holders to favour me with the number of shares standing in their respective names forthwith? E. J. BARTLETT.

**INSTITUTION OF MECHANICAL ENGINEERS.**—The summer meeting of the Institution will be held at Cardiff, commencing on Tuesday next. The papers offered for reading and discussion, after the address of the President, Mr. I. LOWTHIAN BELL, F.R.S., are—"On recent Coal-Shipping Machinery at the Bute Docks, Cardiff," by Mr. John McConnochie, of Cardiff. "Description of the New Locomotive Running Shed of the Taff Vale Railway at Cathays, Cardiff," by Mr. Charles Hurry Riches, of Cardiff. "Description of the Franco 'Tina' or Vat Process for the Amalgamation of Silver Ores," by Mr. Edgar P. Rathbone, of London. "On the use of Petroleum Refuse as Fuel in Locomotive Engines," by Mr. Thomas Urquhart, of Russia. "On the Causes and Remedies of Corrosion in Marine Boilers," by Mr. J. Harry Hallett, of Cardiff. "On the Mineral Wagon of South Wales," by Mr. Alfred Slater, of Gloucester. "On the Application of Electro-Magnets to the Working of Railway Signals and Points," by Mr. Illius A. Timmis, of London.

**HYDRAULIC MINING.**—A valuable and interesting description of the process of hydraulic mining in California, with explanations concerning the origination







of the engine-shaft, and we purpose at an early date putting in skip and capstan road for raising and lowering pitwork, and all ores and debris by virtue of the winding-engine and steam capstan, with the 18-in. pumping engine continuing to work well, and all other work at the surface and underground is being carried out under circumstances well permit.

**ELI TOR.**—H. Bulford, J. Rodda, July 31: The lode as far as cut into at the 100 fm. level has a satisfactory appearance, being composed of capel, spar, munda, and copper. Water continues to flow freely from the breast of the cross-cut, which is a good indication, and shows that the main part of the lode is still farther ahead. The north lode in the 90 east is showing signs of improvement. No. 2 winze sinking below the 80, and 16 fms. east of the 90 end, is still looking exceedingly well. This winze is down about 9 fms., and the lode has produced good quality tin stuff, and 15 tons of arsenical ore per fathom for the whole distance sunk. The south lode at the 90 is without change. The stopes are improved. Saturday next is our setting day, and a full report shall be sent you next week.

**OLD GUNNISLAKE.**—W. Skewis, R. C. Seecombe, July 31: We have again taken down the lode in the adit level, and are pleased to say that it fully maintains its size and value as last reported—1½ to 2 ft. wide, and worth 8 to 10 l. per fathom for tin and copper ore.

**OWEN VEA.**—AND REGURTHA DOWNS.—W. Derry, H. Prin, V. James, July 31: Our shaftmen will next week complete their contract for sinking the engine-shaft, and prepare to cross-cut south and sink the whim-shaft. All our old bargains were taken by the same men on the 19th inst., and several new stopes were also set, the average poles for stoping being 21s. 6d., against 19s. 8d. per fathom at the previous setting. The cost per ton of raising our tin stuff is, however, somewhat reduced, as the lode in one or two of the new points yields fully 20 tons of good tin stuff per fathom, the same being set at 30s. per fathom. We have 10 tons of tin ready to be sent to the smelters on Saturday, the produce of four weeks, although our stamps have been idle nearly half the time, and we should have had 14 tons, but for hindrances we could not control. This batch is entirely crop tin, as having had no frames ready our slime tin (which we find is from one-third to one-half our entire produce) is yet untouched, and a large quantity of inferior quality stuff from clearing our levels, &c., has been stamped to fill up the new floors. No calmer being ready we are restricted to the capacity of our little burning-house at Carbis, three miles distant, but hope to sell 15 tons more for the next four weeks. There will be no difficulty whatever to get 30 tons per month when our floors and calmer are completed.

**FAIR.**—T. Parkyn, July 31: I am pleased to inform you that the engine-shaft is down a little over 5 fms. We have hung the shaft with strong timber, and sunk 5 fms. in a little over three weeks, which is very satisfactory progress; the shaft is 10 ft. by 7 ft. The ground in the bottom of the shaft is very good indeed, and the men are working well. I shall push this shaft with all possible dispatch day and night. I have four men driving out the cross-cut from the adit to hole to the shaft by the time the shaft is down to the 30 fms. level. The ground is good for progress. The new road is completed from the main road to the engine-shaft, and in cutting down the side of the hill we came across a tin lode 5 ft. wide, composed of spar, tin, peach, &c., and from this lode I had opened like a quarry, and it supplied a large quantity of stones for the road; 20 fms. south of this lode we cut open a copper lode, which is the Old Mount lode. We have done nothing in proving it as yet, but the lode is very large at surface at the point we have cut it on the back is 15 fms. above the valley. These lodes will be found valuable and important to the company.

**POLBERO.**—William Vivian, July 31: We are pushing on the work in the engine-shaft with speed. I hope to sell a parcel of tin from our tribute ground again shortly.

**PRINCE OF WALES.**—S. Roberts, July 30: In the 102 end east, and in the stopes in back of this end, the men are working by the side of the lode; consequently, we have no change to report since last week. In the 90 west we are still driving on the new silver lode, which is of the same size and character as for time past. No other change in the mine to notice.

**PLUSHEY.**—M. W. Bawden, July 30: Special Report: I visited this mine on Monday last, and made a thorough inspection of the same; it is located in the parish of Linton, the character of the strata being a correct mineral-bearing formation of clay-slate; a large elvan course also traverses this set, which is about one-half mile from east to west, and the same distance from north to south; there are three north and south lodes and one east and west lode within its limits; on the latter an adit level has been driven over 30 fms., where there is a lode of a strong masterly character, being fully 7 ft. wide, composed of capel, munda, spar, and stones of silver-lead ore—a very promising lode, being only 40 fms. from surface from bottom of the end. One important discovery presents itself by a continuation of the drive of this level west; in raising ground about 40 fms. further you will meet with one of the north and south lodes which will form a junction with this lode, when good results may be expected. I consider this a very important intersection when reached. An engine-shaft has been sunk in a proper position so as to command the whole of the lode, which is now down 15 fms. from surface; a splendid water-wheel erected, pitwork fixed, more on the mine, and all other necessary appliances for pumping the water, drawing the shaft, and to commence sinking this shaft 25 fms. from the lode in the coming week in time for our next report. The north of the engine-shaft will be met with; and at this moderate depth you could extend all operations on the whole of the lode, and no doubt, judging from the highly mineralised indications shown at so shallow a depth, they will be found remunerative on development at deeper points of operation. This mine could be worked very economically, having water available for all purposes.

**T. Trelease.** July 31: We have nothing from this mine since our last report, as the men continue to drive by the side of the lode in the adit. We purpose cutting into the lode in the coming week in time for our next report. The north of the engine-shaft will be met with; and at this moderate depth you could extend all operations on the whole of the lode, and no doubt, judging from the highly mineralised indications shown at so shallow a depth, they will be found remunerative on development at deeper points of operation. This mine could be worked very economically, having water available for all purposes.

**ROMAN GRAVELS.**—Waters and Son, July 29: The 125 north and 125 south of new shaft are worth together 2½ to 3 tons per fathom. The 110 south is worth 1½ ton per fathom, and the same value may be put on the 95 south. The 80 south is worth about 3 tons. It is our opinion that the whole of the ends now being driven are on the eve of improvement. The stopes generally are quite up to the values estimated at any time during the last 12 months, one or two of them being worth 6 to 7 tons per fathom. We made some changes in the stoping ground yesterday, and shall therefore sample another 100 tons of lead ore on Thursday next.

**RUSSELL UNITED.**—John Bray, July 31: We have taken down the lode in the bottom of Matthew's shaft sinking below the 97, where it is 2 ft. wide, composed of quartz and capel, intermixed with copper and munda, but not sufficient to value. At Stephen's engine-shaft we have fixed the new pitwork at the 45, and are now putting in a road, &c., to carry the new line of rods to the lift below the 45, which will be completed to-morrow (Friday), when we shall commence sinking the shaft on Saturday next.

**SINCLAIR.**—W. T. Harris, July 26: My report prepared for the last general meeting gave detailed particulars of all work accomplished, and prospects of each point in connection therewith. Nevertheless I have pleasure in again referring to them, and expressing an opinion as to ultimate results.—The Waco Shaft, North and South Lode: In the 60 level south indications are certainly most encouraging.—In fact, the several solid stones of lead found are ample evidence of the level being driven from the right course, and in close proximity of the object for which it was commenced—the intersection of the great east and west lode, which has yielded such enormous quantities of rich lead in adjoining properties. Both in the back and bottom of the level some specimens of lead are now visible, more particularly in the bottom, and where the lead improves in going deeper. The 50 level north is also an important trial, and should be energetically pushed forward.—Sampson's Shaft: The lode discovered in the sinking is decidedly one of strength and character, and containing the principal constituent of increasing productiveness. In fact, some splendid lead has been extracted therefrom, and now remaining in the north side to be operated upon when the shaft is some 10 or 12 yards deeper, at which point the lead will undoubtedly become more regular and stronger. The general prospects of the mine were never more promising than when worked, and appears to regularly improve as development continued, and I have no doubt discoveries of considerable value will soon be made. I might refer to other points of equal promise.

**STANDARD.**—H. Borsale, July 31: East and West Lode: The lode in the 35 west of shaft is improving in size and value, now fully realised shortly after 3 tons per fathom. I think our expectation will be fully realised shortly. No. 1 stopes, in the back of this level, is producing 20 cwt. of lead per fathom. North and South Lode: No. 1 stopes, in the back of the 33, is producing about 10 cwt. of lead and 25 cwt. of blende per fathom. Having held the winze below the 23 to No. 2 stopes, in the back of the 33, and put a shot past in same, the men are now engaged stripping down the hanging or blende part of the lode north of the winze, preparatory to driving from the forebrest, where the lode is worth 25 cwt. of lead and 25 cwt. of blende per fathom. A stopes in the bottom of the 23, north of No. 2 winze, is worth 25 cwt. of lead per fathom. Engine-Shaft: The bottom lift is now complete and dropped back to the bottom of the shaft, and we have partly cleaned up the stuff. I find in looking at the footwall of the shaft a small stream of water is flowing from a vugh, and I believe a short cross-cut will open up a productive lode. We sold yesterday 40 tons of blende to Messrs. Villiers and Co., which will be delivered on Saturday.

**SOUTH DAREN.**—John Mitchell, July 31: The lode in the 130 end west is still strong, and worth 2½ tons of silver-lead ore per fathom. There is no change in any of the stopes to call for remark. We have got the drawing shaft repaired up to the 20. Drawing and dressing is being carried on regularly. We intend sampling 25 tons of silver-lead ore on Saturday next for sale on Friday, Aug. 8.

**SOUTH DEVON.**—William Hooper, July 31: The lode in Martin's shaft, sinking below the 120, is 5 to 6 ft. wide, worth 20 l. per fm.; there is no particular change in the appearance of the lode since last reported on. The lode in the 110 end west of Martin's shaft, is 4 to 5 ft. wide, producing spar, with stones of munda and copper ore to the value of 12 l. per fm.; this end is now about 15 fms. west of the shaft, worth for the lode in the 110 end west of Martin's shaft, we shall have to drive 2 to 3 fms. before intersecting the main cross-course, the west of which, in the 110, a good lode was driven through for many fathoms. Should this be the case in this level (the 120), which we have no reason to doubt what it will, we consider the prospects in this direction to be exceedingly encouraging. The lode in the stopes in back of this level continues to look very well, and is producing good work for copper ore, worth 12 l. per fm. The lode in the winze sinking below the adit level, west of old pump-shaft, is producing munda, fluor-spar, munda, and occasional stones of black and yellow copper ore. We have now plenty of water for all purposes, and the dressing machinery is being kept on as fast as possible.

**SOUTH PENNETHUR.**—Stephen Davey, July 31: Walton's Engine Shaft: The capel part of the lode, which is being carried down with the shaft, is producing rich stones of tin; indications are also good for copper, as we are finding occasional good patches from the south side, which underlies the main, or cross-bearing part.—Flat-rod Shaft: The lode in the 170 fm. level, east and west of cross-cut, is 8 ft. wide, composed of quartz, fluor spar, capel, and munda, with good stones of both tin and copper, and the lode is improving as advance in appearance and character.

**WEST CARADON.**—N. Richards, July 30: There is no change to notice in Glyn's lode in the 35, west of cross-course, since reported on last week. The stopes in the back of the adit level, on this lode, are also without change to notice, yielding in the aggregate fully 3 tons of copper ore per fathom. A stopes in the bottom of this level will yield 1 ton of ore per fathom.

**WEST CREBOR.**—Andrews, July 30: The engine-shaft is now deep enough to sink for a fork, and we are making good progress in cutting the pit, which I hope will be completed, and commence to drive the 95 west by the

middle of next week. The lode in the 35 west is 4 ft. wide, composed of quartz, capel, munda, and a little copper ore.

**WEST GODOLPHIN.**—T. Hodge, Francis Hodge, July 26: The two 92 fm. levels, extended from the engine-shaft about 3 fms. each way. We cannot expect much improvement until the runs of tin ground are met. The lode, so far as gone through, is more promising than in the 80, and we think we shall find the tin ground more productive when reached. The stopes in the back of the 80 east is worth fully 10 l. per fathom. The 80 south-east on the counter is producing stamping work. The 80, driving on a south branch from Pink lode west, is not far enough advanced to prove the part of the lode standing south; about 6 ft. more will prove whether there is anything of value. We expect to hole the winze in the bottom of the 70 on Pink for ventilation in about 3 ft. deeper. The 70 east on Bellingham's lode is carrying a small branch of good quality tin, and more promising as we advance. The 50 west on Pink lode is improved, and the lode in the end to-day is better than anything yet passed through in this level; we value it at 10 l. per fathom. The stopes in the back of this level is worth 7 l. per fathom. The 40, east of rise, is worth about 7 l. per fm. The 40 west, driving towards rise, is worth 7 l. per fathom. The 40 east on Pink lode (east of the counter) is worth 7 l. per fathom. We have less men stoping this month than last, and no tributaries working; and although the 50 west on Pink has been a difference in our return, being poor for the most part of the month, yet we hope with the improvements in the mine generally, to sell quite as much tin this month as last, and with a few months further advancing the end now being driven, and ventilate and lay available the ground already discovered we shall increase our return with the same number of persons employed; and with the prospects of meeting a good lode when the 52 intersects Pink, with an increase of men, we shall have a further increase. We look upon our prospects in the 50 and 40 in whole ground, giving backs 80 and 70 fms. respectively, as likely to be lasting. The mine is improved, and shows signs of still further improving.

**WEST PATELEY BRIDGE.**—David Williams, July 31: Good progress continues to be made in sinking East Grassington shaft, and every point is pushed forward with energy.

**WHEAL AGAR.**—W. C. Trevena, July 28: Setting Report: The 225 fm. level is being driven east of engine-shaft, by six men, at 9 l. per fathom, where the lode is worth for tin 35 l. per fathom. A rise behind this end is worth for tin 30 l. per fathom, and rising, by six men, at 7 l. 10s. per fathom. A stopes in the back is worth for tin 20 l. per fathom, and stopping, by nine men, at 4 l. per ton. The 215 is driving east of shaft, by four men, at 12 l. per fathom, and worth for tin 25 l. per fathom. A winze sinking below this level (215) is worth for tin 10 l. per fathom, and sinking, by six men, at 10 l. per fathom. In about a fortnight we shall communicate this with the 225 rise, and lay open a large section of rich ground. We have four stopes working in the bottom of the 215, by 38 men, at 5s. 6d. per ton, where the lode is worth on an average 20 l. per fathom. The 215 on south lode is being driven east of cross-course, by six men, at 8 l. per fathom, and lode worth for tin 15 l. per fathom. The cross-cut driving west of cross-course, by four men, at 6 l. 10s. per fathom, is worth for tin 15 l. per fathom. The 205 is being driven east of cross-course, by six men, at 7 l. per fathom, and lode is worth for tin 15 l. per fathom. The 205 is being driven west of cross-course, by six men, at 10 l. per fathom, where the lode is worth for tin 12 l. per fathom. There is a cross-cut driving south at the 205, by six men, at 12 l. per fathom, which has intersected the south lode, and as far as cut through, about 4 ft., is producing fair average tin stone. A stopes in the bottom of the 205, east and west of cross-cut, is worth for tin 25 l. per fathom, and stopping, by 12 men, at 5s. per ton. A stopes in the back is worth for tin 12 l. per fathom, and stopping, by six men, at 6s. per ton of stuff. There are also nine men driving through an arch to form a stopes at 8 l. per fathom, where the lode is worth for tin 8 l. per fathom. The winze sinking below the 195, east of cross-course, by nine men, at 14 l. per fm., is worth for tin 15 l. per fathom. The 195 cross-cut north is driving, by nine men and machine, at 12 l. 10s. per fm. In about 15 ft. further driving we shall be under the new shaft, and commence rising against it. In the 150 we are rising against the new shaft, by nine men and machine, at 12 l. per fathom. The 150 is sinking below the 120, by 12 men, at 24 l. per fathom, and good progress being made. I am pleased to inform you the piece of main rod which caused the breakage in our engine-shaft has been replaced by a new one, and the mine is again in fork to bottom.

**WHEAL COMFORT AND NORTH TRESAVERN.**—H. Treganowan, July 30: The copper lode in the bottom of the 10 fm. level has greatly improved, and is now 2 ft. wide, and worth 14 l. per fathom. I am anxious to prove this shoot of ore at a deeper point, and, therefore, think it advisable to urge on the 20, east of Pink shaft, and have a strong opinion that if this were done it would open up a valuable tribute ground. The Devonshire copper lode stands to the north of the lode mentioned. We have cleared the north shaft on this lode to 75 below adit, and fixed footway. The men are now engaged clearing the 50 and 75 west. We can set several pitches on tribute for copper as soon as hauling appliances are fixed. We have been obliged to suspend operations on Marcom's tin lode, as the stuff is of low average quality, and will not pay to work at the present low price for the ore.

**WHEAL CREBOR.**—H. Phillips, P. D. Holman, July 29: The lode in the new shaft sinking below the 144 is composed of arsenical and pyrites, and munda. The lode in the 144 driving east of new shaft has an improved appearance, yielding 1 ton of good ore per fathom. The part of the lode carried in the 144 west will yield 7 tons of ore and 2 tons of munda per fathom. The stopes in back of this level will yield 8 tons of ore and 4 tons of munda per fathom. The stopes east of winze sunk below the 132 will yield 8 tons of ore per fathom. The stopes west of said winze will yield 8 tons of good ore per fathom. We have suspended the stopes in back of the 132, east of No. 2 winze, to be filled with floors. This is being done in time for the new shaft, and the appearance of the 108 driving east of new shaft is changing to charcoal, and in the appearance of nearing a slide or cross-course; water is flowing from the forebrest. The lode in the 127 driving east of No. 1 slide continues to yield a little munda intermixed with copper ore. The lode in the winze sinking below the 43 will yield 4 tons of ore and 3 tons of munda per fathom. The stopes in back of this level will yield 4 tons of ore and 4 tons of munda per fathom.

**WHEAL GRENVILLE.**—T. Hodge, July 26: I have been all through the mine to-day, and beg to hand you the following as my report thereon:—The 205 east rise has been communicated with the winze below the level above, which has given good ventilation in this part of the mine. The 190 east end is worth 8 l. per fathom; ground hard. In the 178 east end the lode is worth 10 l. per fathom. The 165 process is still in the 150 east end, and in a wide lode, composed of spar, oxide of iron, peach, &c., a kindly lode. On the south part of the drive we have a branch or lode going on with the main vein. When this wears out we expect some improvement. We continue to make good progress in this end. The winze going down below said level, a few fathoms below the 165, is worth about 8 l. per fathom. The 165 west has an improved appearance, letting out more water, which we like to see. We have not done much during the present month. The men are at surface making floors. The 150 east end is worth 8 l. per fathom. The 130 west end is worth 3 l. per fathom. The stopes on the whole are not looking quite so well, but tribute pitches during the past month have improved. The engineers are getting on pretty well with the stamping-engine. We cannot get on with our work until the main shaft of the engine is in its place, but everything is going forward as fast as circumstances will admit of. We shall sell our usual quantity of tin on Thursday next.

**WHEAL PEEVOR.**—W. T. White, July 30: Our great object at present is to cut the new tin lode in the 16 cross-cut north. We have six men in this cross-cut, and have set them a certain contract to cut the lode. We have about 5 fms. more to drive, and we hope to accomplish this in five weeks. We are also driving the 16 fm. level west of winze in bottom deep adit level, so as to effect communication with the above cross-cut. We have about 3 fms. more to drive, and expect to do this against the cross-cut in 10, so that as soon as we cut the lode in the 16 cross-cut communication will at once be effected, and a good section of tin ground will then be laid open, as well as give us a good discharge for the stuff. This being very important we are pushing it forward with all speed. The lode in the end mentioned above is worth 7 l. per fathom. The lode in the deep adit end driving west on new lode is worth 7 l. per fathom. We have nothing new to report in the cross-cut driving north and south at the 48 by 60, and the same remark applies to Great North Devon lode in the new shaft below the deep adit; we must go a little deeper. We have also 15 pitches working on tribute at tributes varying from 10s. to 12s. in 1 l. Seven of these are on the new tin lode, the stuff from which averages 56 lbs. of black tin to the ton of stuff.

**TOLIMA MINING COMPANY.**—Advices received by the mail of July 26, of which the following is an abstract:—

Frias may return .....	\$30,330.4
Cost .....	\$21,017.0
Less charged in April .....	1,494.0=
Estimated net profit .....	10,807.4

Equal in sterling to 18014. 5s.

	Fms.	Ft.	In.
The underground report shows .....	62	2	1
of ground expended, of which .....	8	4	9
were unproductive, leaving .....	53	3	4

of productive ground.

The invoice represents \$27.75 tons of 27 oz. ore.

The agent states that in consequence of the pumping and crushing wheel having been stopped for repairs the 70 and 80 were under water during a considerable portion of the month. He adds all the sections, however, are drained and in full work again, but he has no special change to report from the deep sections of the mine beyond the fact that a rich stone of galena was broken below the engine-shaft under the 80.

**ENGINE-SHAFT** contains a large vein of quartz and schist which in the east end yields small portions of pyrites. There is, however, a little change in the general features since last month with the exception that a prominent ledge of galena was broken a few days ago from the western end from what appears at present an isolated string in the lode. Sinking is now regularly progressing.

**80 EAST.**—The vein at sight is 6 ft. wide, of grey schist and quartz laced with strings of pyrites charged with pyrites and spots of grey silver. The main leader lying against the footwall is 12 in. in width, which in the centre of the end is an almost solid branch of pyrites.—N.B.: June 19: A decided improvement is apparent in this end, rich mineral having been broken and sent to surface, consisting principally of pyrites and galena largely associated with grey silver, estimated at 25 cwt. per fathom.

**80 WEST.**—This end contains a strong vein of quartz, carbonate of lime, and schist, carrying a little pyrites, but otherwise unproductive. Much water is liberated from the lode.

**ROBERTS WINZE** under the 70 east, the principal leader continues about 2 ft. in width, but the ore is not quite so strong as last reported.—N.B.: June 19: We are taking down the footwall of this winze, and find a promising lode standing in the side in this end. We think that with depth there would be an improvement of ore here also. Present yield estimated at from 20 to 25 cwt. per fathom.

**70 WEST.**—The lode in this end is 4 ft. wide, 2 ft. of this consisting of carbonate of lime, quartz, and slate, which in the earlier portion of the month was mixed throughout with strings of galena and blende, valued at 10 cwt. per fm. After fluctuating the appearance has again improved, the main leader being mixed with lead, blende, and pyrites estimated at from 10 to 15 cwt. of export ore per fathom.

**ESPERANZA SHAFT.**—The vein is the entire width of the shaft; it is strong

and massive, but unproductive.—N.B.: June 19: A stone of lead and blende 3 in. in width was broken from this shaft to-day.

**60 WEST.**—During the past 10 fms. of driving the level has been extended upon the junction of two branches of vein. The latter one being the strongest, and corresponding most closely with the 20 vein, is that which is now being followed. This branch is 5 to 6 ft. in width, composed of dark slate and quartz on the footwall and a lighter coloured schist on the north portion. Much water is being liberated from the end. The underlie of the footwall ranges from 55° to 65° north-west, and appears to be softening more rapidly, still further corresponding with the 20. The vein does not produce saving mineral. The north branch is 3 ft. wide, consisting of quartz and slate, and is occasionally productive, the yield being estimated at 5 cwt. per fathom.

**20 SOUTH-WEST.**—We are rising and stoping over the backs at a point showing the greatest probability of holing into the old works. The vein is here estimated to yield from 5 to 10 cwt. per fathom. The trial is not, however, upon the most productive portion of the lode in the 20. Before resuming the driving (on the change of direction of the end) the south portion of the level will be further proved by stripping down the side to ascertain whether any part of the lode has been left standing.

**THE STOPES** in present operation comprise the Nos. 1, 3, and 5 stopes over the back of the 70 east. These average from 20 to 30 cwt. of export ore per fathom. The bottom, west of the shaft in the 60 west, is yielding 25 cwt. of export ore per fathom. The stopes and drift, east of Rincon's rise, is yielding 20 cwt. per fathom, and the rise and stopes over the 20 south-west level are yielding from 5 to 10 cwt. per fathom.

**SABANILLA MINE, ENGINE-SHAFT.**—This has been sunk 81 ft. under adit to date. The vein in the sole continues small and pinched, being from 8 to 10 in. wide, composed of quartz and a small string of blende, but not sufficient to save or value.

**12 EAST.**—The whole width of the lode in the end from wall to wall is 2 ft. In the roof the vein carries a mixture of ore about 6 in. in thickness, and in the lower portion of the drive about 2 in. of mineral, almost exclusively blende.

**12 WEST.**—The end has been suspended during the sinking of the winze under adit. The cross-cut has likewise been suspended for a similar reason.

**ADIT WINZE.**—This has been sunk 31 ft. to date. In the east end the vein is 15 in. wide, the principal leader being a branch of dark-coloured quartz 6 in. in width. In the west end of the winze the vein is 2 ft. in width, consisting of quartz and decomposed granite, largely intermixed with pyrites. During the last 4 ft. of sinking the branch of blende ore previously reported has pinched out entirely. The lode has increased its underlie at the present depth. It is proposed to continue the sinking until the 12 west is holed into, this being necessary for ventilation.

**LOWER ADIT.**—This has been driven about 5 fms. from entrance to date. The first portion being a species of cross-cut I have nothing to report respecting the vein until this is reached.

**ROCK-DRILLS.**—A drill is at work in the eastern drive, and after the present month's contract expires a machine will also be employed for sinking. As it appears at present the chief prospects for striking an improved yield of mineral at this mine are at a 20 east, and for this reason the sinking is being urged on.

**P.S.:** At the moment of closing the mail I am just advised by telephone that the 20 rise (Frias) has holed into the old workings satisfactorily.

## WATSON BROTHERS MINING CIRCULAR.

WATSON BROTHERS,  
MINEOWNERS, STOCK AND SHARE DEALERS, &c  
1, ST MICHAEL'S ALLEY CORNHILL, LONDON

The sampling at Prince of Wales is 74 tons of copper ore, including 2 tons of precipitate; the latter shows a produce of 47½ per cent. The tin sale for the month is 2½ tons.

In 1853 and 1854 Mr. Hyde Clarke published some papers showing that quicksilver had been found in England, Scotland, and Ireland, and in Mr. Watson's review of 1854, published in the *Mining Journal*, he called attention to the subject, and to the desirability of making researches for the ores of cinnabar, but nothing seems to have come of it. We cannot answer the question as to percentage and price.

This same year, 1854, was described in regard to mines as one of unparalleled depression and of almost unparalleled losses. There was a complete panic in the share market, and most mines suffered, but small speculations almost of all. Bullers dropped from 1200 l. to 575 l. South Caradon, 400 l. to 290 l.; West Caradon, 280 l. to 180 l.; Alfred Consols, 27 l. to 18 l.; West Providence, 40 l. to 14s. Among the smaller fry many from high premiums became utterly worthless in the market. Everyone prophesied then, as they would prophesy in 1884, that mining business was at an end, and things would never improve. Now, let anyone curious in such matters turn to the *Mining Journal* for December, 1855, and in the review of that year see what an extraordinary change had so soon taken place in metals, in mines, and in shares. We quote from the Annual Review of that year as follows:—"Many circumstances have occurred in 1855 to render it one of the most important years in the annals of mining, for whether we now regard the prosperous state of our home mines, the remunerative prices of metals, the large amount of dividends declared, the great advance in the prices of shares in general, or the buoyancy of business transactions, they form a great contrast to the year 1854, which at this time twelvemonth was described as one of 'unparalleled depression, and of almost unparalleled losses.'"

The cause of this sudden change was an advance in metals, one or two good discoveries and improvements in mines, and to the weeding of the market that took place the year before.

In 1854 lead was in a very depressed state, but it soon afterwards became more active, and as the smelters were short of stock the price rose in 1855 4 l. to 5 l. per ton. Copper and tin also advanced. In most shares a great advance took place, and there was general activity and prosperity in the market.

A singular coincidence is also suggested by the reviews in question. The panic in 1854 was mainly brought about by the failure of "gold mining in England and Wales," for which there had been a great rage, on the introduction of Berdan's machine, which found gold in all (doctored) ores. The depression in the present year has been brought about in a great measure by the enormous losses in Indian gold mines, which, from the very first, we have denounced as strongly as we did 30 years ago gold mining in England.

In reading of the state of mining affairs in 1854, as disclosed by the reviews in question, it almost seems as if we were reading of 1884! And as 1855 became as prosperous as 1854 was the other way, let us hope that history will again repeat itself, better times set in, and make 1885 another 1855, so far as mining prosperity is concerned.

Pedn-an-drea means "top of the hill" or town.

At the New Caradon the No. 1 lode is worth 1 ton of yellow copper ore per fathom in the winze below the 50, and is a strong masterly lode.

At East Blue Hills, driving both east and west from the shaft has just been commenced. The lode going west is worth 9 l. to 10 l. per fathom; east, 10 l. to 12 l. per fathom. The appearance of the lode, the agents write, is "altogether of the most encouraging kind." At present the ends are hardly clear of the shaft, and any day may show a great improvement.

Everything is paid up monthly at East Blue Hills, even the royalties, so that there is not and never has been a debt on the mine.

Mr. Courtney said in the House of Commons last evening that the Commissioners of Woods and Forests were "especially anxious to promote mining," and that "Crown leases are not more onerous than those of other landowners." The Woods and Forests must have been gammoning Mr. Courtney; and we will hunt up the old files of the *Mining Journal* and tell him how they once served us. In the meantime can Mr. Courtney tell us of any other mine-owners granting leases and inserting a clause that the lessees (who may have spent or may have to spend thousands in developing the mine) shall give them, in addition to royalties and dead rents—one quarter part of any profit that may be made on the sale of the mine? And did he ever hear of a case where parties who had spent a large sum upon a mine, and being invited to take a new lease, agreed to do so, but finding this objectionable clause inserted (it was not in the old), and refusing to assent to it, had their mine and machinery seized, sold, and the proceeds retained? He shall hear the whole case shortly. We have tried hard for years to shame the Woods and Forests, and nothing would induce us to take a lease under them.

The Duchy of Cornwall officers have always treated their lessees, so far as our experience goes, and we have held mines under them for nearly 40 years, with fairness and consideration.



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## The Mining Market: Prices of Metals, Ores, &amp;c.

**METAL MARKET—LONDON, AUG. 1, 1884.**

IRON.	£ s. d.	£ s. d.	TIN.	£ s. d.	£ s. d.
Pig, 60 lb., Clyde...	2 4 0	2 4 0	English, ingot, f.o.b. ...	85 10 0	85 10 0
Scotch, all No. 1 ...	2 4 0	2 4 0	bars ...	85 10 0	85 10 0
Bars Welsh, f.o.b. Wales ...	17 6 0	17 6 0	refined ...	87 10 0	87 10 0
in London ...	5 7 6	5 7 6	Australian ...	83 7 6	83 7 6
Stafford ...	6 7 6	6 7 6	Banca ...	nom.	nom.
in Tyne or Tees ...	5 0 0	5 0 0	Straits ...	82 2 6	82 2 6
Swedish, London ...	9 0 0	9 10 0			
Rails, Welsh, at works ...	4 17 6	4 17 6			
Sheets, Staff., in London ...	5 3 0	5 3 0			
Plates, ship, in London ...	7 10 0	7 10 0			
Scotch, Staff. ...	5 7 6	6 10 0			
Nail rods, Staff. in Lon. ...	6 7 6	6 7 6			
STEEL.					
English spring ...	12 0 0	12 0 0			
cast ...	10 0 0	10 0 0			
Swedish, keg ...	13 0 0	13 0 0			
flag, hain ...	13 10 0	14 10 0			
Rails at works ...	4 12 6	5 0 0			
Light, at works ...	5 12 6	6 12 6			
LEAD.					
English pig, common ...	10 15 0	11 0 0			
in London ...	10 17 6	11 2 6			
W.B. ...	11 2 6	11 5 0			
sheet and bar ...	11 5 0	11 10 0			
pipe ...	11 15 0	11 15 0			
red ...	13 5 0	13 5 0			
white ...	14 10 0	15 10 0			
patent shot ...	13 10 0	13 10 0			
Spanish ...	10 12 6	10 15 0			
NICKEL.					
Metal per cwt. ...	—	—			
Ore 10 percent. per ton. ...	—	—			
SILVER.					
Silesian ordinary brands ...	2 6 14	5 0			
special brands ...	14 7 6	14 10 0			
English Swansea ...	15 10 0	15 10 0			
Sheet zinc ...	17 15 0	17 17 6			

\* At the works, 1s. to 1s. 6d. per box less for ordinary; 10s. per ton less for Canada; 1X 6s. per box more than 1C quoted above, and add 6s. for each X. Terne-plates 2s. per box below tin-plates of similar brands.

**REMARKS.**—At the early part of the week our markets showed an improving tendency, at least so far as the principal metals are concerned, but this improvement has not been followed up in all cases, and there is no particular new feature to influence the future of our markets in either direction; but at the same time if the feeling of hesitation, nervousness, and anxiety, is not speedily removed, there is but little reason to believe that prices will do otherwise than continue to crumble away. There is anxiety as to the future, not only as regards the demand, but more particularly as regards the supply. The former is expected to continue to be curtailed by consumers, and at present purchasing only enough for their pressing requirements, while the latter is thought not unlikely to be increased, both of which events would have a very injurious effect upon the trade, as they would tend to augment stocks, and thus further depress the already overburdened markets. The cheapness of money at the present time may, perhaps, help to ward off any serious difficulties, and possibly may even thus late be the means of ultimately reviving trade, but its cheapness proves a very deplorable state of business. It shows that money is not being freely used for the purpose of developing the demands, for encouraging enterprise, and for stimulating operators to effect purchases. When money is freely being offered at 4 and even ½ per cent., it is a convincing evidence that trade is bad and in a most feeble condition.

Speculators may every now and then be attracted to any one metal by the cheapness of prices or some other cause, and thus create in that metal a temporary advance, and thereby produce a stiffening influence over prices for other metals, but such an improvement only lasts for a short time when it is not followed up by a restoration in the genuine demand. This is the reason why the cheap money now produces such a little effect upon the speculative demand. Operators look at the cause of cheapness rather than at the facilities of finance which are thereby afforded, and the same may be said of the low prices and the reasons why they do not bear their usual influence in increasing the demand. Confidence must be restored, and some good reason given for anticipating a speedy revival in regular trade, the low prices and cheap money will bear much effect in promoting business, but in the meantime there can be little danger in purchasing at current rates, as with one exception prices for all metals are decidedly favourable, and there is every facility afforded to holders for financing their stocks. The Revenue Returns again give another clear proof of the indifferent state of trade, and the reduction in the revenue of customs, excise, stamps, telegraph service, &c., shows at least that business is comparatively bad, the comparison being with last year, a season which it will be remembered was by no means a flourishing one for trade. The statistics for some metals issued for the month of July are fairly favourable, but there is nothing in them except for copper which calls for any very special comment, and the little apart in some metals which has taken place during the week must continue for some little time longer ere it can afford grounds for believing in its permanency.

**COPPER.**—This week there has been a much more active market for copper, and considerably higher prices have been realised for Chili bars, other descriptions also stiffening in value. It is so long since there has been anything like briskness in this market that the extra vitality during the week has been much appreciated, and has broken that gloom which had settled upon the market. Prices have strengthened somewhat by merely 2s. 6d. per ton per day, at others by 7s. 6d., and yesterday morning the quotation was very strong, but weakened later on in the day; while to-day business has been very animated, and higher prices realised. The principal business has been for cash, and the limited business for forward prompts would indicate that operators have no great amount of confidence in the advance being of more than a temporary character. Some of the smelters report holding a fair number of orders for manufactured, and prices, partly from this cause and partly from the advancing prices for the raw material, have become stronger. Any rise in the quotations for Indian sheets is likely to have an injurious effect upon the demand from that country, and no orders are likely to be coming forward just yet while at dearer rates. Indian indentors have in many instances fairly satisfied their wants at the reduced rates, and are, therefore, unlikely to continue purchasing at the improved prices, especially as there is no reason to believe, or evidence to show, that prices will be sustained, and that continued support will be given to the market. To-day the market has been very spirited, owing to the announcement of excellent deliveries for last month, light charters for the last half of July—1500 tons from Chili—and generally improved statistics. The total visible stock has been reduced to about 43,000 tons. The imports of Chili produce during the last half of last month were 2357 tons, and the deliveries 2135 tons; the imports of other kinds of copper were 727 tons, and the deliveries 2466 tons. The stock of Chili produce in first and second hands in Liverpool and Swansea yesterday was 24,388 tons, against 24,219 tons on July 15.

**IRON.**—With the exception of Scotch pigs there has continued a very dull, inanimate, and lifeless market; prices have kept steady, and the changes in the market have been immaterial. Enquiries for all classes of manufactured are most limited, and everything seems to fall in inducing consumers and shippers to effect their purchases beyond the most hand-to-mouth quantities. With reference to Scotch pigs, there has been a more active demand, and prices during the early part of the week assumed a stiffening tendency. Last week we drew attention to the advisability of reducing the number of furnaces in blast, and it is therefore satisfactory to see by this week's returns that two have been damped down. Reduced production is the only way to ensure better prices. The demand is not sufficiently good to warrant improved rates, and, therefore, if remunerative prices are to be realised, it can only be done by curbing the output. Of course the damping down of only two furnaces will not make any very material difference to the supply, nor cause any particular relief to the market, but it is a step in the right direction, an example which other makers would doubtless do well to follow, and already a little better tone has been imparted to the market.

Low prices will not encourage operators into the market unless there is some fair reason to anticipate that prices may shortly advance; but when there is a prospect of supplies being kept under requirements, and the heavy stocks more or less reduced, then not only is a spirit of speculation implanted in the market, the tone made more cheerful, and the feeling characterised with greater animation, but the regular demand is also increased, as consumers and shippers not infrequently fully satisfy their wants, and abandon the policy of merely giving out orders to meet their most urgent and pressing daily requirements. There has been a steady demand for makers' iron, and prices have been tolerably firm. The Glasgow warrant market, after having closed steadily last week, opened on Monday with a strong tone, and greater disposition to buy, the price steadily advancing from 47s. 3½d. to 48s. 5½d. on the following day. On Wednesday, although there was a fair business transacted, the price was scarcely so strong, the quotation being 41s. 5d. to 41s. 5½d.; but yesterday there was more doing, and the price was strong but steady at 41s. 7d. to 41s. 7½d., and the closing figure this afternoon is 41s. 7d. per ton. The shipments last week were 10,315 tons, against 14,058 tons for the same week of last year, being a decrease of 3743 tons, and which makes the total shipments for the whole of this year 325,151 tons, against 367,481 tons for the same time of last year, and 365,515 tons for the similar period of 1882. There are two furnaces less in blast now than a week ago, the total being 34, against 36, and the public stock has been reduced by 430 tons, and now amounts to 587,666 tons, against 588,038 tons last week.

The imports of pig-iron into Grangemouth last week were 3790 tons, against 4210 tons for the corresponding week of last year, being a decrease of 420 tons, which makes a total decrease for the whole of this year, compared with last, of 4530 tons. The Middlesbrough market is reported very dull, business being almost at a standstill. Second-hand lots of No. 3 are offering at 38s. 9d., and makers' quote 37s., warrants being nominally quoted at 38s. 9d. The public stock has been reduced by 160 tons, and is now estimated at 56,768 tons. The deliveries last week were 1,320 tons, and those for the whole of last month were about 66,000 tons, thus showing a marked falling off compared with June. It is generally expected that prices will be further reduced. In manufactured there is very little doing, and prices are steady at about 57s. 5s. per ton, 41s. 15s. for angles, 5s. for ship-plates, and 5s. for puddled bars. There is no improvement in the trade at Wolverhampton, and wages disputes continue to agitate the market. Prices are consequently easy, and common bars can be bought at 57s. 15s., hoops at 57s. 5s. to 57s. 10s., and sheets at 71s. for doubles. Shropshire wire rods are quoted at 87s., clinier pigs at 37s. 6d., and part-mills at 42s. 6d. per ton. At Birmingham some of the works are said to be fairly well employed, but there are scarcely any orders in hand to keep the works in operation, and manufacturers are dependent on what may come to hand to keep their mills in regular operation. In marked bars there is very little doing, the principal contracts being for marked bars and sheets at recent quotations. Sales of pigs continue very small, and prices generally are strong, but show no improvement.

**TIN.**—This market has remained tolerably steady, and a fair business has been transacted, principally about 82½ lbs. per ton for cash parcels of foreign. The statistics for the month of July must be pronounced favourable, the deliveries having been very satisfactory, but, notwithstanding this, it does not seem likely that more than a temporary advance, and perhaps not that will be effected. There is much to be said in favour of the market, much to implant confidence and encourage buying, but yet there is no disposition to follow up the market. If prices slightly advance—be that advance ever so trifling—there immediately follows a desire to press sales, and take whatever profits may be offering. This disposition to push sales is carried so far, that not only does the market lose all that it had previously gained, but prices invariably recede to still lower figures.

This has been a notable characteristic for some time past, and it is evidenced by the heavy fall in prices during the last three months, and while such a feeling continues to exist there is little hope of the market being permanently enhanced. The reduced price, the diminished stocks, the light supplies, and heavy deliveries have all failed to establish higher rates, and to engender confidence to holders, and we must wait until the prevailing feeling of hesitation has been removed ere we can now expect these weighty influences to bear their usual and important effect upon the market. At the Banca sale in Holland yesterday the average price realised was 51½s., equal to 85½ lbs., a figure not so good as was expected to be obtained, and which had, perhaps, a temporary adverse effect upon our market, but prices have quickly picked up what they lost, and to-day there has been a very strong and active demand with rising prices.

**SPELTER** is quiet, with but little demand, and the quotation to-day is 14½s. 6d. to 14½s. 5s. for ordinary brands, and 14½s. 7s. 6d. to 14½s. 10s. for specials.

**LEAD** is very firm, and as high as 10½s. has been paid for Spanish in warehouse. We quote Spanish at 10½s. 6d. to 10½s. 15s., and English at 10½s. 15s. to 11½s. per ton.

**STEEL.**—The demand for rails is fairly good and prices are for the most part steady.

**TIN-PLATES.**—A fair amount of business is being transacted, and there is no quotable alteration in prices.

**QUICKSILVER** is without change, at 5s. 6d. 3d.

The **MINING SHARE MARKET** has shown signs of greater activity, though the dealers have been chiefly engaged in the settlement of the usual fortnightly account. One or two mines have been in demand at advanced prices, though, generally speaking, quotations are nominal. The mines dealt in include Dolcoath, East Pool, Tincroft, East Blue Hills, West Kitty, Bratsberg, Prince of Wales, Oscar, Wheal Crebor, Polberro, and others.

**TIN** is firmer; the total stocks to-day are 2000 tons less than on corresponding day last year, and there is an impression abroad that it is likely to advance in price. The standard for ore has not changed since June 11. Carn Breas have advanced to 4½s. Cook's Kitchen, 9 to 10. Dolcoath, 73 to 75; a dividend of 1½s. 10s. is expected at the meeting. East Pool, 43 to 44. East Blue Hills have been in good demand, and leave off 4½s.; driving has been commenced on a productive lode below the adit. Killifreth, 5-16ths to 7-16ths; Mounts Bay, 2s. to 3s.; South Condurrow, 8½ to 9½. South Frances have improved to 8½s. Tincrofts have risen from 5 to 8½s. 9s.; the mine has improved in the bottom level. Trevaunance, 4s. 6d. to 5s. 6d.; West Bassett, 3 to 3½; West Frances, 5 to 5½; Wheal Agor, 16½ to 17; Wheal Bassett, 3½ to 4; Wheal Grenville, 6 to 6½; Wheal Kitty (St. Agnes), 4 to 4½; Wheal Uny, 4 to 4½; Phoenix, 2 to 2½; South Kitty, 4 to 4½; West Polbreen, 4 to 4½; Wheal Jane, 4 to 4½; West Kitty, 10½ to 11, ex div.; at the meeting the accounts showed a profit on four months' working of 3335½, and a dividend of 12s. per share (36000) was declared. The tin sold realised 6255½. The tin sold at an average of about 50½s. per ton, and showed a profit of 26½s. per ton. The report states that the lode in the 84 level driving east of cross-cut is worth 10½s. per fathom. The 80 is worth 20½s. per fathom; the 72, 15½s.; 60 east, 15½s.; 60 west of cross-cut, 8½s.; east of cross-cut, 20½s. Trevaunance, 1½ to 1½; the accounts here showed a balance in hand of 446½. A call of 2s. per share was made. The 55 ft. level east at the copper lode is worth 15½s. to 20½s. per fathom. New Kitty, 1 to 1½; at the meeting here a call of 2s. per share was made. The accounts showed a credit balance of 6½s. Polberro, 1½ to 2; the engine-shaft is being sunk as rapidly as possible, and arrangements are being made to put up the engine. West Godolphin, 1 to 1½.

**COPPER.**—At the Cornish Ticketing, on Thursday, there was no alteration in the standards for ore. The average price of the ore sold was 2½s. 19s. 6d. per ton; produce, 7½s. standard, 80½s. 1s. Bedford United are quoted 1½ to 1½; Devon Great Consols, 2½ to 3; Gunnislake (Clitters), 7-16ths to 9-16ths; New Cook's Kitchen, 1 to 1½; New West Caradon, 4 to 4½; Prince of Wales have been enquired for at 4 to 4½; New Caradon, 4 to 4½; the lode here is worth 1 ton of copper ore per fathom. West Crebor, 1s. to 2s.; West Seton, 4 to 4½; Wheal Crebor, 1½ to 1½; the sampling here is 474 tons of ore. Melanear, 4 to 4½; the sale of ore here—532 tons—realised 107½s. At South Penrithal the caple of the lode, which is being carried down with the shaft, is producing rich stones of tin. In Flat-rod shaft the lode is improving. Devon Friendship, 1s. to 2s.; the ends and stopes continue to look well, and points throughout the mine are improving. South Caradon, 4 to 4½.

**LEAD** is firmer, but there is very little doing in lead mines, and prices are merely nominal. Vans are quoted 1 to 1½; Great Laxey, 8½ to 9½. Roman Gravel have advanced to 2½ to 3. Leadhills have risen to 1½ to 1½. Old Shepherds, 4 to 4½; East Rose, 4 to 4½. South Darren, 4 to 4½; the lode in the 130 west is worth 2½ tons silver-lead ore per fathom. The sampling next week will be 25 tons. Wear-dale, 1½ to 1½.

**FOREIGN MINES.**—Shares of this class have enjoyed their full proportion of the general improvement, and prices are upon the whole firmer. Akankos are quoted 4 to 4½; Alamillos, 1½ to 1½; Almada and Tinto, 3-16ths to 5-16ths; Australian, 1½ to 2 d. Birdseye, 4 to 1; from the directors' report it appears the gold obtained during the past year has been 5941-07 ozs., realising 23,509½s. 9s. at a cost of 15,417½s. 1d., leaving a profit of 8091½s. 1d., out of which 4116½s. 3s. 10d. has been expended on the completion of Uncle Sam Works, leaving a net balance of 3975½s. 15s. 3d. A dividend of 1s. per share was paid on December last, and another of 2s. per share since the closing of the accounts. Good and profitable results are anticipated for the future. Bratsberg, 1½ to 1½. California, 4 to 4½; the report of the directors, prepared for the meeting on Thursday next, states that during the past financial year liabilities have been cleared off amounting to about 25,500½s., which includes the mortgage loan, the balance due to the Hidden Treasure vendors, and half the amount due to the California vendors. The whole indebted-

ness of the company on May 31 last was thus reduced to about 5860½s., while the assets show in cash 7941½s., stores 1427½s., and unissued shares at par, 2279½s., making a total of 11,647½s. The payment of the loans relieves the company from 780½s. per annum for interest. A reduction of 100½s. a year has been effected in the office expenses, and 350½s. per annum in consulting engineer's fees, making a total saving for the future of 1230½s. per annum. The balance of 7941½s. in the bank and in hand on May 31, 1884, allows of a further dividend of 1s. per share being paid, and leaves a cash balance of 1555½s. to be carried forward. The dividend, if sanctioned by the meeting, will be paid on Aug. 9.

Cape Copper, 42 to 44; Chile Gold, 4 to 4½; Chontales, 4 to 4½; Colorado United, 1½ to 1½; Colombian Hydraulic, 4 to 4½; Copiapo, 2½ to 2½; Fortuna, 2½ to 3½; Frontino and Bolivia, 4 to 4½. Kapanga, 4 to 3-16ths; very favourable news has been received from Captain Argall. He states that he has struck gold in No. 2 rise in the No. 8 level, Scotty's lode, and that he expects to open up some good stoping ground from this point. The trials the new manager was making are progressing satisfactorily, and are bearing out the anticipations he set forth in the report of his inspection issued to the shareholders some little time since.

La Plata, 3-16ths to 5-16ths; Linares, 2½ to 3½. Mason and Barry have improved to 10½s. 10½s., and considerable business is doing in them. New Emma, 4 to 4½; New Potosi, 4 to 4½; Nouveau Monde, 1-16th to 4½; Organos, 4 to 11-16ths; Orita, 15-16ths to 1 1-16th; Panulillo, 4½ to 4½; Quebrada Railway, 4 to 4½; Richmond, 3½ to 3½. Rio Tinto, 15½ to 16, and a good business doing; ditto bonds, 99 to 101. Ruby and Dunderberg, 4 to 4½; Schwab's Gully, 5½ to 6½ (ex div.). South Australian Copper Mines Corporation, 4 to 3-16ths the latest advices from the Blinman Mine are considered satisfactory, the mine was looking well, and the stopes were yielding from 1½ to 5 tons of 25 per cent. ore per fathom, and the profit for the month of June was expected to equal that for May—200½s. An abundance of rain had fallen, more than had been known for some years, filling the springs, and setting at rest an adequate supply of water for dressing purposes. St. John del Rey, 65 to 75; business was done to-day at 70, but the price afterwards declined to 69. Tharsis, 5½ to 6½; Tolima, A, 5½ to 6½ (ex div.). United Mexican, 3 to 3½; the telegram received this week says:—"The excess of returns over outlay in the mine of San Cayetano de la Ovejera for the week ended July 26 is \$6600, and on El Diamante \$50. Will send \$15,000."

**CROWN MINERAL LEASES.**—IMPORTANT ANNOUNCEMENT.—Those who have had the honour of holding mineral leases from Her Majesty's Commissioners of Woods and Forests, will hear with pleasure the important announcement made by Mr. Courtney in the House of Commons on Thursday night, that the clause known as the one-fourth consideration clause had been abandoned. This was elicited by a question asked by Mr. John Rolls, M.P. for the county of Monmouth, well-known for his exertions in the interests of mining.

The further statement of Mr. COURTNEY will, however, be information to the holders of leases under the Woods and Forests—"I have no reason to think that Crown mining leases are more onerous in respect of royalty or other conditions than those given by other Welsh landowners. I see no evidence to show that the terms required by the Crown injure mining enterprise; on the contrary, the Commissioners of Woods are especially anxious to develop their mining properties in every proper manner."

Anyone who differs from this view would do well to state the circumstances, as Mr. Rolls has stated his intention of pursuing the matter further. Subjoined is the full question and answer.

Mr. ROLLS asked the Secretary to the Treasury whether holders of mineral leases under the Commissioners of Woods and Forests, more especially in the counties of Cardigan and Merioneth, were required to pay higher rents and royalties than those asked by the adjoining landowners; whether clauses were inserted in the leases from the Commissioners of Woods and Forests not known of in any private mineral leases; whether in some cases the lessees had been threatened with forfeiture of their leases for not working the mines, although their doing so, in the face of the present price of minerals, would entail a serious loss, and although all rents had been paid-up; whether he would grant, as an unopposed return, a statement of the number of acres belonging to the Crown in the counties of Cardigan and Merioneth, and how many acres of the same were at present let under mineral leases; and whether he was aware that the conditions imposed by the Commissioners of Woods and Forests were such as to practically prohibit searches for minerals in these two counties.

Mr. COURTNEY: I have no reason to think that Crown mining leases are more onerous in respect of royalty or other conditions than those given by other Welsh land owners. The only special provision in the former, known as "the one-fourth clause," is now no longer inserted. In no recent case has forfeiture been threatened because the mines were not worked. I will obtain for the hon. member the acreages for which he asks, but I do not think there would be any use in laying them before Parliament. I have seen no evidence to show that the terms required by the Crown injure mining enterprise on the contrary, the Commissioners of Woods are especially anxious to develop their mining properties in every proper manner.

The **MARKET FOR MINE SHARES** on the Stock Exchange has been decidedly better, the tin statistics are favourable, and the prices of both tin and copper are well maintained, whilst the improvement in lead continues. These facts have created an altogether better feeling, and it is generally considered that if the price of metals offered any encouragement capitalists would be quite ready to give substantial evidence of their willingness to support home mining enterprise, provided undertakings be brought forward in such a manner that the system of overloading capital accounts shall be superseded, and the investors' money really applied to the working of the mines. The numerous failures of new companies during the past two years are generally attributed to the insane cupidity of the middlemen who have acted as vendors, but as the public have now become alive to the evil, and as promoters are beginning to recognise the fact that 50,000½s. worth of saleable shares are better than 400,000½s. worth which can only be sold at 4 or 5 per cent. of their nominal value, it is hoped that with a more equitable system there will be a return of enterprise and prosperity. The market fluctuated much to-day, but closed fairly firm.

Our usual telegram from Cornwall this evening says:—"During the past week the Cornish Mine Share Market has been more buoyant, with a decidedly better tone, shares generally are firmer, and there has been more inclination for business. Both Dolcoath and East Pools are strong, and close firm, the returns keeping up very favourably. Tincroft continues in request, shares have been done at 8½, and are scarce. Agars are also firmer, and there has been rather more enquiry for South Frances and Carn Brea. West Kitty continues well held. At the meeting on Tuesday a profit of 3791½s. on four months' working was reported. A dividend of 12s. per share was declared. The prospects of the mine are very encouraging. At New Kitty and at Trevaunance United calls of 2s. per share were made. At Redruth Ticketing yesterday 893 tons of copper ores realised 265½s., the standard remaining unaltered. The quantities comprised 532 tons from Mellanear, realising 107½s., and 210 tons from Levant producing 927½s. Wheal Owles is reported to be looking much better. The Neath Harbour Smelting and Rolling Works, to the formation of which reference was made in last week's Mining Journal, has issued its prospectus, which will be found in another column. The object of the enterprise is to purchase and work the celebrated Crown Copper Smelting and Spelter Works, and the concession of the famous Gornio Calamine Mines, consisting of 398 hectares (about 800 English acres), situated in the province of Bergamo, Kingdom of Italy, and estimated to contain (without calculating new seams) 420,000 tons of ore. A further concession has been obtained giving the right to explore over about 100 hectares of land. The capital is 150,000½s., in shares of 5½s. each. Divided into 20,000 preference and 10,000 deferred shares. Issue of 100,000½s. in 20,000 preference shares of 5½s. each, bearing interest at the rate of 12 per cent. per annum. Until the preference shares are called up in full the deferred shares, even when there are profits to justify it, will only receive dividends on a sum equal to the amount called up for the time being upon the preference shares. When dividends have been paid for five consecutive years on the preference shares at the rate of 12 per cent. per annum, and when the dividends upon the deferred shares



have also been paid as above for a like amount and period, the distinction between the two classes of shares as preference and deferred will cease, and the dividends will be thenceforth struck on both at the same rate per cent. The board of directors is formed of well known men of business, and the properties appear to be such as with care and energy may be made very unremunerative.

The London and Middlesex Land Company, with a capital of 50,000*l.* in shares of 5*l.* each, has been formed to purchase estates, chiefly in the Metropolis, with a view to resell them in small plots, or create ground-rents on them after improvement and development. The prospectus states that freehold ground rents have been for many years in steadily increasing demand, not only on the part of the investing public, but by trustees, bankers, and insurance companies, as the security they afford renders them available for trust purposes. That building land in the neighbourhood of London must steadily increase in value is a natural consequence of the increasing population. In a recent speech made in the House of Commons, Mr. A. J. Balfour, M.P., said:—"London increased by 50,000 souls a year, so that every 12 months a vast town as big as Northampton was added to the Metropolis." As an instance of the success which has attended the principal land companies, and the good return to the shareholders, one similar enterprise is mentioned which paid 12 per cent. dividend in 1883, and half-a-dozen others which returned 10 per cent. dividend, one of the latter giving also 10 per cent. bonus. The first land acquired by the company overlooks the grounds of the Alexandra Palace, and is within five minutes' walk of Muswell Hill Station, whence Broad-street, King's Cross, Moorgate-street, and other stations may be quickly reached. It is also within the six miles radius of Charing Cross, and is accessible from the omnibus and tram routes, or by cab-drive from any part of the Metropolis. The road on the principal front of the estate is already constructed and the sewer laid, so that a comparatively small outlay is required in road-making and planting to develop the estate. Other estates will be purchased from time to time, and will be developed in a similar manner. After increasing their value by road-making, planting, and other improvements, it is proposed to resell them in retail portions on the deferred system of payment, and to give small purchasers every facility by granting them free conveyances, and by providing other easy terms. But where the directors deem it desirable, the plots will be let to responsible parties and ground rents created.

The Anglo-American Brush Electric Light Corporation directors are able to inform the shareholders that during the past six months further considerable progress has been made in perfecting the manufacture and in developing the business of the corporation. The excellence of the apparatus supplied by the corporation, both for arc and incandescence lighting is now generally recognised, and the corporation stands high in the estimation of the public not only as manufacturers of the highest class electric lighting plant, but also as contractors for electric lighting installations. The corporation has been successful in establishing the reputation for high efficiency of their Victoria dynamos and lamps for incandescence lighting, and their special suitability for the purpose of lighting ships. Contracts have been obtained from the Admiralty, after severe competitive tests, for fitting up the following of H.M. ships of war with the incandescence light—Colossus, Triumph, Raleigh, Bacchante, and Conqueror. Among the other important work undertaken by the corporation may be mentioned a provisional installation of three 500 light dynamos at Buckingham Palace, the supply of the machines for lighting the Parliament Houses at Melbourne, and the exclusive lighting of the Forestry Exhibition at Edinburgh. Although owing to the continued depression in electric lighting generally, the volume of business effected during the past half-year has not been so large as was hoped for, yet it is a satisfactory feature of the business that ship orders have been made to nearly all quarters of the globe, and that there is a continuance of orders from distant countries. The directors feel that there is ground for congratulation in the fact that at present not only all charges, ordinary and exceptional, met by revenue, but that the financial position of the corporation is such as to enable the board to undertake important contracts which they have in view, involving further expenditure of capital, without asking the shareholders to provide additional supplies.

Devon Great Consols have been in good demand all the week, and advanced to 23*½*. Good progress is being made at the adit shaft at the Wheel Maria part of the mine, where some important discoveries are shortly expected. In Wheel Emma, below the 205 fm. level west, the lode is worth 5 tons of mineral per fathom; and at Watson's, in the 112, the lode is producing 2 tons of mineral per fathom.

Devon Great United,  $\frac{1}{2}$  to  $\frac{3}{4}$ ; the 120 fm. level, east and west of Willesford's shaft, is yielding good quality of copper and mundic ores, as well as the 60, west of Watson's shaft. An increased sampling of copper ores will be made.

Dolcoath shares have been in better demand, and advanced to 71 to 74*½*; the quarterly dividend of about 30*s.* per share will be paid on Aug. 18.

Drakewalls United, 3-16ths to  $\frac{1}{4}$ ; as will be seen in another column the annual general meeting of shareholders was held on Thursday last, and was well attended. The policy to be pursued as proposed by the directors in the development of the property was unanimously approved of. It would appear that a vigorous prosecution in depth will be carried out forthwith, in order to get under the long run of rich tin ground gone down in the bottom levels, and it is important to point out that the deeper they sink the richer will become the tin ground, approaching the junction of granite and killas formation, for it is in a similar formation to this, where the profitable tin-producing mines have been, and are still unfolding their great wealth in the Dolcoath, Camborne, and Redruth districts. This was pointed out at the meeting of shareholders by Mr. Peter Watson, the London manager, and it must be a satisfaction to the shareholders generally to find that there was such a harmonious and unanimous feeling amongst those present at the meeting with respect to the future of this property.

East Pool shares advanced from 42 to 43, 44. A quarterly dividend of 20*s.* per share is expected at the meeting on Aug. 11.

Kit Hill,  $\frac{1}{2}$  to  $\frac{3}{4}$ ; favourable progress is being made in driving the great tunnel level, 16 ft. having been driven during the past week. The north engine-shaft is now being sunk below the 100, and in the 100 west the agent reports the lode is 5 ft. wide, and yielding tin ores, as well as the 88 west.

Lead Hills have been in active demand all the week, and have advanced to 1*½*, owing, it is said, to the fact that the bottom levels, as well as the shallower levels, are opening out valuable ore ground, and some further important discoveries are shortly expected. This, with the improved price of lead and the rumour that a profit will be shown.

Roman Gravel, 2*½* to 3*½*; and said to be in demand, owing to the rise in the price of lead. A further sampling of 100 tons of lead ore has been made this week, and the agent reports that the values of the ore-producing points are equal to those at any time during the past 12 months, several of them being worth 6 to 7 tons of ore per fathom.

South Devon United,  $\frac{1}{2}$  to  $\frac{3}{4}$ ; the lode in Martin's shaft, sinking below the 120 fathom level, is worth 20*l.* per fathom, and in this level driving west, about 15 fathoms distant, is worth 12*l.* per fm. An increased quantity of water is now being obtained for ore-dressing purposes.

South Wheal Frances shares advanced to 8*½*, 8*¾*, and in good demand, owing to the improvements which are now taking place at the mines, and the improving price of tin.

West Wheal Seton shares, which have been selling at very low prices for some time, are said to have become in demand at 4*½* to 5, as the mine is reported to be improving.

In Lead Mine Shares much more business is reported, and as the metal is fully 10*s.* a ton better a very encouraging feeling exists with regard to the future. A correspondent writes:—"The advance in the price of metals, especially in lead, tin, and copper, which have at last made a start from the great depression which has characterised them during the last two or three years, must be highly cheering to shareholders in mines containing these minerals, as a gradual advance is now expected by those well qualified to judge in home mining pursuits and the metal market."

Ruby and Dunderberg,  $\frac{1}{2}$  to  $\frac{3}{4}$ ; the weekly report is again chiefly interesting as regards the work being carried on at the Lord Bryon mine. The ore in No. 2 cave is developing fairly, and at No. 1 cave the preliminary work will soon now be finished, enabling them to commence cleaning out the bottom, where a good body of ore will probably be met with. There is still a difficulty about getting tributers to work; but some more men had been put on during the week.

The Antioquia (Frontino) Company's statement of profit and loss for May shows:—"The attle and sand crushed produced 70 ozs. gold, the estimated value of which, including exchange, was 198*l.* 3*s.*; whilst the cost at the mines, at Medellin, and in London, was 285*l.* 7*s.*; leaving an estimated loss of 87*l.* 4*s.*, in addition to 300*l.* spent on capital account."

The Frontino and Bolivar statement of profit and loss for May shows that 2632 tons (of 20 cwt.) from general mines produced (average 15 dwts. per ton), 2033 ozs.; gold bought, 115 ozs. = 2148 ozs. The estimated value of the gold, including exchange, was 6108*l.* 6*s.*; cost of the mines at Medellin and in London, 5107*l.* 9*s.*;

monthly allowance for freight, commission on gold sales, and sundry fluctuating outlays not immediately ascertainable, estimated at 250*l.*; paid for gold bought of tributers, 227*l.* 5*s.* = 5584*l.* 14*s.* 5*d.*, leaving an estimated profit of 523*l.* 11*s.* 7*d.*. Mr. Franklin White reports:—"The water supply was good and the mineral crushed was on the whole of better quality. The Tigrito, Rosario, and Cordoba mines gave good produce, Silencio, San Joaquin, and Palmichela improved, but Cecilia and Salada were not good. The cost rose as I had expected. The extra cost department was high, due to cross-cuts in Silencio and Cordoba, where good work was done, and in Palmichela, where unfortunately, the ground was very hard. There was a considerable increase in the laboratory department, where a new furnace is being put up with the intention of smelting pyrites. The rains have been heavy latterly, and the ditch has suffered somewhat, but not to an extent equal to that of last year. The heavy rains have ceased (by the 17th), so I hope that we may have a steady supply of water, which will assist us greatly in getting returns."

The London and South African Exploration Company have advised of remittances amounting to 7100*l.* for the last four weeks, making with the 28,070*l.* previously advised a total of 35,170*l.* for 32 weeks.

The Town and Country Bank (of Adelaide, South Australia) have opened a branch in London, under the management of Mr. Henry D. Cook.

The Railway Share Trust Company have received telegraphic information from New York that "Outline plans for re-organisation of the Wabash, St. Louis and Pacific Railroad were mailed on July 30."

The interest warrants for the half-year ending July 31, on the Six per Cent. B. or Preference shares, of the Railway Share Trust Company (Limited) have been posted.

The Waterloo Mills Company, Hull, directors have declared a dividend for the past half-year at the rate of 15 per cent. per annum, passing 25000*l.* to reserve, and carrying forward 513*l.* 3*s.* 5*d.*

The Merchant Banking Company, of London, directors at a board meeting on Thursday declared an interim dividend at the rate of 6 per cent. per annum for the half-year ended June 30, payable on Sept. 1, and out of the profits of the half-year have made provision for an exceptional loss incurred during that period.

OSCAR GOLD MINE.—The following letter dated July 25 has been received from Capt. Daw, the managing director in Norway, and will, no doubt, be read with interest by shareholders:—"I have this day been over all the lodes granted to us, and I am pleased to inform you our prospects look very satisfactory indeed. In washing samples every day gold is found in nearly every one. A sample I saw this morning washed from Hanson's showed splendid gold. This lode with many others when the property was sold to the company was not known. All the gold that we have got broken since you were here is from other lodes, not from Oscar shaft. There has not been anything done towards sinking yet. It will take 14 days or three weeks before sinking will be commenced. In my son's report of last week the produce given of the different samples some were high and some were low. I beg to inform you these samples were all taken very near the surface; in fact, some were from the surface, and to-day when I inspected the different places I was surprised at the results. It certainly appears now we shall have a great mine here. Respecting the machinery the drawing engine will be ready in 14 days. The large engine boiler is fixed in its place, and the masons are busily engaged in building the flues and brickwork around it. This I expect will be completed in about 10 days. There is a lot of work done towards the stamps and floors; in fact, I did not expect to see things in so forward a state. I wish you had come with me; I feel sure you would have been pleased."

BRATSBURG COPPER MINES.—Mr. Albert Daw writes under date July 22:—"I have the pleasure to inform you that two peasants living near Gulnes have written here to say they have discovered the old level on the mine said to have been hidden away by the old German miners within the period 1780—1790. They state in their letter that they have worked a couple of days to clear away the rubbish, and have come down on a wooden roof covered with clay. According to report this level was the richest part of the Gulnes Mine. I have requested them to let me know on what part of the mine it is situated, and on receipt of their reply will let you know what we think of it. Murchison's engine will be started in a few days, the skip-road being nearly ready. The parts of the steamer are at last sent off from Moss. It will probably take nearly two months to build and paint it."

DEVON FRIENDSHIP.—An official circular has been issued, in which it is stated that out of the 350 shareholders in the company, about 70 have already agreed to take nearly 8000 of the 1*l.* shares to be issued at 10*s.* discount, payable by instalments of 1*s.* each, and entitled to one-half of the net profits available for dividend, provided the whole 20,523 are subscribed for. It is pointed out that the property is a most valuable one, where discoveries have not got to be made, but with large available resources only waiting for the necessary machinery to return great profits. With the water drained from the old mine there would be immediately found broken and laid open hundreds of thousands of tons of most valuable produce, which has lately advanced considerably in price, and is likely to continue to do so. With the requisite moderate amount to erect machinery, the undertaking is as far removed from a speculation as almost anything can be.

GOLD AND SILVER.—Messrs. FIKLEY and ABELL (July 31) write: With a continuance of orders for gold, prices have been well maintained. The Bank has sold, in bars, 40,000*l.* for India, 33,000*l.* for Paris, and 150,000*l.* in sovereigns, for Canada. The total received is 37,000*l.* in coin, from South America. The imports are 15,500*l.* from Australia; 39,000*l.* from the West Indies; 30,200*l.* from the River Plate; total, 84,700*l.*. The exports by the Peninsular and Oriental steamers amount to 95,000*l.*. Silver has slightly hardened since our last, and the arrival by the Royal Mail and Pacific steamers was sold at 50*½**d.*. To-day, with rather firmer rates from India, we quote 50*½**d.*. The imports are 53,700*l.* from New York; 29,200*l.* from the West Indies; 42,000*l.* from Chili = 124,900*l.*. The Peninsular and Oriental steamers take altogether 166,500*l.* to India. Mexican Dollars to the amount of 79,700*l.* came to hand by the Moselle, and these were sold at 50*½**d.*, a slight reduction on previous rates, and we give this as today's quotation. The Peninsular and Oriental s.s. Shannon takes 101,500*l.* to China and the Straits. The quotations for bullion are: Bar gold, fine, 7*l.* 10*d.* per oz.; standard; bar gold containing 20 dwts. silver, 7*l.* 11*½**d.* per oz.; standard; bar silver fine, 50*½**d.* per oz.; standard; bar silver, containing 5 grs. gold, 51*½**d.* per oz.; standard; cake silver, 51*½**d.* per oz.; Mexican dollars, 80*½**d.* per oz.; quicksilver, 5*s.* 6*d.*. Discount, 3 per cent.

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120 Colicambe Consols, 5*s.* 10 South Condurrow, 4*s.* 100 Hoover Hill, 3*s.* 6*d.*  
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20 Frongoch, 7*s.* 6*d.* 20 Wheal Bassett, 43*½*. 100 Nouveau Monde, 1*s.* 9*d.*  
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## The Mining Market: Prices of Metals, Ores, &amp;c.

METAL MARKET—LONDON, AUG. 1, 1884.

IRON.	£ s. d.	£ s. d.	TIN.	£ s. d.	£ s. d.
Pigs, G.M.S., f.o.b., Clyde...	2 1 7	—	English, ingot, f.o.b. ...	85 10 0	—
Scotch, all No. 1 ...	2 2 4	—	bars ...	86 10 0	—
Bars Welsh, f.o.b. Wales ...	4 17 6	—	refined ...	87 10 0	—
" in London ...	5 7 6	—	Australian ...	83 7 6	—
" Stafford ...	5 7 6	—	Banco ...	nom.	—
" in Tyne or Tees ...	5 8 0	—	Strait ...	82 2 6	—
Swedish, London ...	9 0 0	9 10 0			
Rails, Welsh, at works ...	4 17 6	—			
Sheets, Staff., in London ...	7 5 3	7 10 0			
Plate, ship, in London ...	7 10 0	8 0 0			
Hoops, Staff., in London ...	6 7 6	6 10 0			
Nail rods, Staff., in Lon. ...	6 7 6	—			
STEEL.					
English spring ...	12 0 0	12 0 0			
cast ...	13 0 0	14 0 0			
Swedish, ...	13 0 0	14 0 0			
Rails at works ...	4 12 6	5 0 0			
Light, at works ...	5 12 6	6 12 6			
LEAD.					
English pig, common ...	10 15 0	11 0 0			
" L.B. ...	10 17 6	11 2 6			
" W.B. ...	11 2 6	11 5 0			
sheet and bar ...	11 5 0	11 10 0			
red ...	13 5 0	—			
white ...	14 10 0	16 10 0			
patent shot ...	13 10 0	—			
Spanish ...	10 12 6	10 15 0			
NICKEL.					
Metal per cwt. ...	—	—			
Ore 10 percent. per ton. ...	—	—			
Silesian ordinary brands ...	2 6 14	5 0			
special brands ...	7 6 14	10 0			
English Swansea ...	15 10 0	—			
Sheet zinc ...	17 15 0	17 6			

\* At the works, 1s. to 1s. 6d. per box less for ordinary; 10s. per ton less for Canada; 1X 6s. per box more than 10 quoted above, and add 6s. for each X. Terne-plates 2s. per box below tin-plates of similar brands.

REMARKS.—At the early part of the week our markets showed an improving tendency, at least so far as the principal metals are concerned, but this improvement has not been followed up in all cases, and there is no particular new feature to influence the future of our markets in either direction; but at the same time if the feeling of hesitation, nervousness, and anxiety, is not speedily removed, there is but little reason to believe that prices will do otherwise than continue to crumble away. There is anxiety as to the future, not only as regards the demand, but more particularly as regards the supply. The former is expected to continue to be curtailed by consumers, and shippers purchasing only enough for their pressing requirements, while the latter is thought not unlikely to be increased, both of which events would have a very injurious effect upon the trade, as they would tend to augment stocks, and thus further depress the already overburdened markets. The cheapness of money at the present time may, perhaps, help to ward off any serious difficulties, and possibly may even be the means of ultimately reviving trade, but its cheapness proves a very deplorable state of business. It shows that money is not being freely used for the purpose of developing the demands, for encouraging enterprise, and for stimulating operators to effect purchases. When money is freely being offered at 11 and even 12 percent., it is a convincing evidence that trade is bad and in a most feeble condition.

Speculators may every now and then be attracted to any one metal by the cheapness of prices or some other cause, and thus create in that metal a temporary advance, and thereby produce a stiffening influence over prices for other metals, but such an improvement only lasts for a short time when it is not followed up by a restoration in the genuine demand. This is the reason why the cheap money now produces such a little effect upon the speculative demand. Operators look at the cause of that cheapness rather than at the facilities of finance which are thereby afforded, and the same may be said of the low prices and the reasons why they do not bear their usual influence in increasing the demand. Confidence must be restored, and some good reason given for anticipating a speedy revival in regular trade ere the low prices and cheap money will bear much effect in promoting business, but in the meantime there can be little danger in purchasing at current rates, as with one exception prices for all metals are decidedly favourable, and there is every facility afforded to holders for financing their stocks. The Revenue Returns again give another clear proof of the indifferent state of trade, and the reduction in the revenue of customs, excise, stamps, telegraph service, &c., shows at least that business is comparatively bad, the comparison being with last year, a season which it will be remembered was by no means a flourishing one for trade. The statistics for some metals issued for the month of July are fairly favourable, but there is nothing in them except for copper which calls for any very special comment, and the little spurt in some metals which has taken place during the week must continue for some little time longer ere it can afford grounds for believing in its permanency.

COPPER.—This week there has been a much more active market for copper, and considerably higher prices have been realised for Chili bars, other descriptions also stiffening in value. It is so long since there has been anything like briskness in this market that the extra vitality during the week has been much appreciated, and has broken that gloom which had settled upon the market. Prices have strengthened sometimes by merely 2s. 6d. per ton per day, at others by 7s. 6d., and yesterday morning the quotation was very strong, but weakened later on in the day; while to-day business has been very animated, and higher prices realised. The principal business has been for cast, and the limited business for forward prompts would indicate that operators have no great amount of confidence in the advance being of more than a temporary character. Some of the smelters report holding a fair number of orders for manufactured, and prices, partly from this cause and partly from the advancing prices for the raw material, have become stronger. Any rise in the quotations for Indian sheets is likely to have an injurious effect upon the demand from that country, and no orders are likely to be coming forward just yet while at dearer rates. Indian indentors have in many instances fairly satisfied their wants at the reduced rates, and are, therefore, unlikely to continue purchasing at the improved prices, especially as there is no reason to believe, or evidence to show, that prices will be sustained, and that continued support will be given to the market. To-day the market has been very spirited, owing to the announcement of excellent deliveries for last month, light charters for the last half of July—1500 tons from Chili—and generally improved statistics. The total visible stock has been reduced to about 43,000 tons. The imports of Chili produced during the last half of last month were 2357 tons, and the deliveries 2185 tons; the imports of other kinds of copper were 727 tons, and the deliveries 2468 tons. The stock of Chili produced in first and second hands in Liverpool and Swansea yesterday was 24,388 tons, against 24,219 tons on July 15.

IRON.—With the exception of Scotch pigs there has continued a very dull, inanimate, and lifeless market; prices have kept steady, and the changes in the market have been immaterial. Enquiries for all classes of manufactured are most limited, and everything seems to fail in inducing consumers and shippers to effect their purchases beyond the most hand-to-mouth quantities. With reference to Scotch pigs, there has been a more active demand, and prices during the early part of the week assumed a stiffening tendency. Last week we drew attention to the advisability of reducing the number of furnaces in blast, and it is therefore satisfactory to see by this week's returns that two have been damped down. Reduced production is the only way to ensure better prices. The demand is not sufficiently good to warrant improved rates, and, therefore, if remunerative prices are to be realised, it can only be done by curtailing the output. Of course the damping down of only two furnaces will not make any very material difference to the supply, nor cause any particular relief to the market, but it is a step in the right direction, an example which other makers would doubtless do well to follow, and already a little better tone has been imparted to the market.

Low prices will not encourage operators into the market unless there is some fair reason to anticipate that prices may shortly advance; but when there is a prospect of supplies being kept under requirements, and the heavy stocks more or less reduced, then not only is a spirit of speculation implanted in the market, the tone made more cheerful, and the feeling characterised by greater animation, but the regular demand is also increased, as consumers and shippers not infrequently fully satisfy their wants, and abandon the policy of merely giving orders to meet their most urgent and pressing daily requirements. There has been a steady demand for makers' iron, and prices have been tolerably firm. The Glasgow warrant market, after having closed steadily last week, opened on Monday with a strong tone, and greater disposition to buy, the price steadily advancing from 47s. 3d. to 48s. 8d. on the following day. On Wednesday, although there was a fair business transacted, the price was scarcely so strong, the quotation being 41s. 5d. to 41s. 5d.; but yesterday there was more doing, and the price was strong but steady at 41s. 7d. to 41s. 7d., and the closing figure this afternoon is 41s. 7d. per ton. The shipments last week were 10,315 tons, against 14,058 tons for the same week of last year, being a decrease of 3743 tons, and which makes the total shipments for the whole of this year 325,154 tons, against 367,481 tons for the same time of last year, and 365,515 tons for the similar period of 1882. There are two furnaces less in blast now than a week ago, the total being 94, against 96, and the public stock has been reduced by 430 tons, and now amounts to 587,606 tons, against 588,038 tons last week.

The imports of pig-iron into Grangemouth last week were 3790 tons, against 4210 tons for the corresponding week of last year, being a decrease of 420 tons, which makes a total decrease for the whole of this year, compared with last of 4530 tons. The Middleborough market is reported very dull, business being almost at a standstill. Second-hand lots of No. 3 are offering at 36s. 9d., and makers' quote 37s., warrants being nominally quoted at 36s. 9d. The public stock has been reduced by 160 tons, and is now estimated at 56,766 tons. The deliveries last week were 13,320 tons, and those for the whole of last month were about 65,000 tons, thus showing a marked falling off compared with June. It is generally expected that prices will be further reduced. In manufactured there is very little doing, and prices are steady at about 5s. 5s. per ton, 4d. 15s. for angles, 5d. for ship-plates, and 6s. for puddled bars. There is no improvement in the trade at Wolverhampton, and wages disputes continue to agitate the market. Prices are consequently easy, and common bars can be bought at 5d. 15s., hoops at 6d. 5s., to 6d. 10s., and sheets at 7d. 10s. for doubles. Shropshire wire rods are quoted at 6d., clinch pigs at 37s. 6d., and part-mines at 42s. 6d. per ton. At Birmingham some of the works are said to be fairly well employed, but there are scarcely any orders in hand to keep the works in operation, and manufacturers are dependent on what may come to hand to keep their mills in regular operation. In marked bars there is very little doing, the principal cause being the lack of market and steady quotations. Sales of pigs continue very small, and prices generally are strong, but show no improvement.

TIN.—This market has remained tolerably steady, and a fair business has been transacted, principally about 82½ lbs. per ton for cash parcels of foreign. The statistics for the month of July must be pronounced favourable, the deliveries having been very satisfactory, but, notwithstanding this, it does not seem likely that more than a temporary advance, and perhaps not that will be effected. There is much to be said in favour of the market, much to implant confidence and encourage buying, but yet there is no disposition to follow up the market. If prices slightly advance—be that advance ever so trifling—there immediately follows a desire to press sales, and take whatever profits may be offering. This disposition to push is carried so far, that not only does the market lose all that it had previously gained, but prices invariably recede to still lower figures.

This has been a notable characteristic for some time past, as it is evidenced by the heavy fall in prices during the last three months, and while such a feeling continues to exist there is little hope of the market being permanently enhanced. The reduced price, the diminished stocks, the light supplies, and heavy deliveries have all failed to establish higher rates, and to engender confidence to holders, and we must wait until the prevailing feeling of hesitation has been removed ere we can now expect the healthy influences to bear their usual and important effect upon the market. At the Banca sale in Holland yesterday the average price realised was 51½, equal to 85½, a figure not so good as was expected to be obtained, and which had, perhaps, a temporary adverse effect upon our market, but prices have quickly picked up what they lost, and to-day there has been a very strong and active demand with rising prices.

SPELTER is quiet, with but little demand, and the quotation to-day is 14s. 2s. 6d. to 14s. 5s. for ordinary brands, and 14s. 7s. 6d. to 14s. 10s. for specials.

LEAD is very firm, and as high as 10s. 15s. has been paid for Spanish in warehouse. We quote Spanish at 10s. 12s. 6d. to 10s. 15s., and English at 10s. 15s. to 11s. per ton.

STEEL.—The demand for rails is fairly good and prices are for the most part steady.

TIN-PLATES.—A fair amount of business is being transacted, and there is no quotable alteration in prices.

QUICKSILVER is without change, at 5s. 6s. 3d.

THE MINING SHARE MARKET has shown signs of greater activity, though the dealers have been chiefly engaged in the settlement of the usual fortnightly account. One or two mines have been in demand at advanced prices, though, generally speaking, quotations are nominal. The mines dealt in include Dolcoath, East Pool, Tincroft, East Blue Hills, West Kitty, Bratsberg, Prince of Wales, Oscar, Wheel Crebor, Polberro, and others.

TIN is firmer; the total stocks to-day are 2000 tons less than on corresponding day last year, and there is an impression abroad that it is likely to advance in price. The standard for ore has not changed since June 11. Carn Breas have advanced to 4½. Cook's Kitchen, 9 to 10. Dolcoath, 73 to 75; a dividend of 1s. 10s. is expected at the meeting. East Pool, 43 to 44. East Blue Hills have been in good demand, and leave off ½ to ¾; driving has been commenced on a productive lode below the adit. Killifreth, 5-16ths to 7-16ths; Mounts Bay, 2s. to 3s.; South Condurrow, 8s. to 9s. South Frances have improved to 8½. Tincrofts have risen from 5 to 8½, 9; the mine has improved in the bottom level. Treavean, 4s. 6d. to 5s. 6d.; West Bassett, 3 to 3½; West Frances, 5 to 5½; Wheal Agar, 16½ to 17; Wheal Bassett, 3½ to 4; Wheal Grenville, 6 to 6½; Wheal Kitty (St. Agnes), ½ to ¾; Wheal Uny, ½ to ¾; Phoenix, 2 to 2½; South Kitty, ½ to ¾; West Polberre, ½ to ¾; Wheal Jane, ½ to ¾; West Kitty, 10½ to 11, ex div.; at the meeting the accounts showed a profit on four months' working of 3335s., and a dividend of 12s. per share (3600s.) was declared. The tin sold realised 6255s. The tin sold at an average of about 50s. per ton, and showed a profit of 26s. per ton. The report states that the lode in the 84 level driving east of cross-cut is worth 10s. per fathom. The 80 is worth 20s. per fathom; the 72, 15s.; 60 east, 15s.; 60 west of cross-cut, 8s.; east of cross-cut, 20s. Treavean, 1½ to 1½; the accounts here showed a balance in hand of 446s. A call of 2s. per share was made. The 55 fm. level east at the copper lode is worth 15s. to 20s. per fathom. New Kitty, 1 to 1½; at the meeting here a call of 2s. per share was made. The accounts showed a credit balance of 6s. Polberro, 1½ to 2; the engine-shaft is being sunk as rapidly as possible, and arrangements are being made to put up the engine. West Godolphin, 1 to 1½.

COPPER.—At the Cornish Ticketing, on Thursday, there was no alteration in the standards for ore. The average price of the ore sold was 2s. 19s. 6d. per ton; produce, 7½; standard, 80s. 1s. Bedford United are quoted 1½ to 1½; Devon Great Consols, 2½ to 3; Gunnislake (Clitters), 7-16ths to 9-16ths; New Cook's Kitchen, 1 to 1½; New West Caradon, ½ to ¾; Prince of Wales have been enquired for at ½ to ¾; New Caradon, ½ to ¾; the lode here is worth 1 ton of copper ore per fathom. West Crebor, 1s. to 2s.; West Seton, 4 to 4½; Wheal Crebor, 1½ to 1½; the sampling here is 474 tons of ore. Mellanear, ½ to ¾; the sale of ore here—532 tons—realised 1076s. At South Penstruthal the caple of the lode, which is being carried down with the shaft, is producing rich stones of tin. In Flat-roof shaft the lode is improving. Devon Friendship, 1s. to 2s.; the ends and stopes continue to look well, and points throughout the mine are improving. South Caradon, ½ to ¾.

LEAD is firmer, but there is very little doing in lead mines, and prices are merely nominal. Vans are quoted 1 to 1½; Great Laxey, 8½ to 9½. Roman Gravels have advanced to 2½ to 3. Leadhills have risen to 1½ to 1½. Old Shepherds, ½ to ¾; East Rose, ¾ to ¾. South Darren, ½ to ¾; the lode in the 130 west is worth 2½ tons silver-lead ore per fathom. The sampling next week will be 25 tons. Wear-dale, 1½ to 1½.

FOREIGN MINES.—Shares of this class have enjoyed their full proportion of the general improvement, and prices are upon the whole firmer. Alkanoks are quoted ¾ to ¾; Alamillos, 1½ to 1½; Almada and Tirito, 3-16ths to 5-16ths; Australian, 1½ to 2 d. Birdseye, ¾ to 1; from the directors' report it appears the gold obtained during the past year has been 5941·07 ozs., realising 23,509l. 9s. at a cost of 15,417l. 9s. 1d., leaving a profit of 8091l. 19s. 1d., out of which 4116l. 3s. 10d. has been expended on the completion of Uncle Sam Works, leaving a net balance of 3975l. 15s. 3d. A dividend of 1s. per share was paid on December last, and another of 2s. per share since the closing of the accounts. Good and profitable results are anticipated for the future. Bratsberg, 1½ to 1½. California, ¾ to ¾; the report of the directors, prepared for the meeting on Thursday next, states that during the past financial year liabilities have been cleared off amounting to about 25,500l., which includes the mortgage loan, the balance due to the Hidden Treasure vendors, and half the amount due to the California vendors. The whole indebted-

ness of the company on May 31 last was thus reduced to about 5860l., while the assets show in cash 7941l., stores 1427l., and unissued shares at par, 2279l., making a total of 11,647l. The payment of the loans relieves the company from 780l. per annum for interest. A reduction of 100l. a year has been effected in the office expenses, and 350l. per annum in consulting engineer's fees, making a total saving for the future of 1230l. per annum. The balance of 7941l. in the bank and in hand on May 31, 1884, allows of a further dividend of 1s. per share being paid, and leaves a cash balance of 1555l. to be carried forward. The dividend, if sanctioned by the meeting, will be paid on Aug. 9.

Cape Copper, 42 to 44; Chile Gold, ½ to ¾; Chontales, ½ to ¾; Colorado United, 1½ to 1½; Colombian Hydraulic, ½ to ¾; Copiapo, 2½ to 2½; Fortuna, 2½ to 3½; Frontino and Bolivia, ½ to ¾. Kapanga, ½ to 3-16ths; very favourable news has been received from Captain Argall. He states that he has struck gold in No. 2 rise in the No. 8 level, Scotty's lode, and that he expects to open up some good stopping ground from this point. The trials the new manager was making are progressing satisfactorily, and are bearing out the anticipations he set forth in the report of his inspection issued to the shareholders some little time since.

La Plata, 3-16ths to 5-16ths; Linares, 2½ to 3½. Mason and Barry have improved to 10½, 10½, and considerable business is doing in them. New Emma, ½ to ¾; New Potosi, ½ to ¾; Nouveau Monde, 1-16th to ¾; Organos, ½ to 11-16ths; Orita, 15-16ths to 1 1-16th; Panulillo, 4½ to 4½; Quebrada Railway, 4 to 4½; Richmond, 3½ to 3½. Rio Tinto, 15½ to 16, and a good business doing; ditto bonds, 99 to 101. Ruby and Dunderberg, ½ to ¾; Schwab's Gully, 5½ to 6½ (ex div.). South Australian Copper Mines Corporation, ½ to 3-16ths the latest advices from the Blinman Mine are considered satisfactory, the mine was looking well, and the stopes were yielding from 1½ to 5 tons of 25 percent. ore per fathom, and the profit for the month of June was expected to equal that for May—200l. An abundance of rain had fallen, more than had been known for some years, filling the springs, and setting at rest an adequate supply of water for dressing purposes. St. John del Rey, 65 to 75; business was done to-day at 70, but the price afterwards declined to 69. Tharsis, 5½ to 6½; Tolima, A, 5½ to 6½ (ex div.). United Mexican, 3 to 3½; the telegram received this week says:—"The excess of returns over outlay in the mine of San Cayetano de la Ovejera for the week ended July 26 is \$6600, and on El Diamante \$50. Will send \$15,000."

CROWN MINERAL LEASES.—IMPORTANT ANNOUNCEMENT.—Those who have had the honour of holding mineral leases from Her Majesty's Commissioners of Woods and Forests, will hear with pleasure the important announcement made by Mr. Courtney in the House of Commons on Thursday night, that the clause known as the one-fourth consideration clause had been abandoned. This was elicited by a question asked by Mr. John Rolfe, M.P. for the county of Monmouth, well-known for his exertions in the interests of mining.

The further statement of Mr. COURTNEY will, however, be information to the holders of leases under the Woods and Forests—"I have no reason to think that Crown mining leases are more onerous in respect of royalty or other conditions than those given by other Welsh landowners. I see no evidence to show that the terms required by the Crown in mining enterprise; on the contrary, the Commissioners of Woods are especially anxious to develop their mining properties in every proper manner."

Anyone who differs from this view would do well to state the circumstances, as Mr. Rolfe has stated his intention of pursuing the matter further. Subjoined is the full question and answer.

MR. ROLFE asked the Secretary to the Treasury whether holders of mineral leases under the Commissioners of Woods and Forests, more especially in the counties of Cardigan and Merioneth, were required to pay higher rents and royalties than those asked by the adjoining landowners; whether clauses were inserted in the leases from the Commissioners of Woods and Forests not known of in any private mineral leases; whether in some cases the lessees had been threatened with forfeiture of their leases for not working the mines, although their doing so, in the face of the present price of minerals, would entail a serious loss, and although all rents had been paid-up; whether he would grant, as an unopposed return, a statement of the number of acres belonging to the Crown in the counties of Cardigan and Merioneth, and how many acres of the same were at present let under mineral leases; and whether he was aware that the conditions imposed by the Commissioners of Woods and Forests were such as to practically prohibit searches for minerals in these two counties.

MR. COURTNEY: I have no reason to think that Crown mining leases are more onerous in respect of royalty or other conditions than those given by other Welsh landowners. The only special provision in the former, known as "the one-fourth clause," is now no longer inserted. In no recent case has forfeiture been threatened because the mines were not worked. I will obtain for the hon. member the acreages for which he asks, but I do not think there would be any use in laying them before Parliament. I have seen no evidence to show that the terms required by the Crown in mining enterprise on the contrary, the Commissioners of Woods are especially anxious to develop their mining properties in every proper manner.

THE MARKET for MINE SHARES on the Stock Exchange has been decidedly better, the tin statistics are favourable, and the prices of both tin and copper are well maintained, whilst the improvement in lead continues. These facts have created an altogether better feeling, and it is generally considered that if the price of metals offered any encouragement capitalists would be quite ready to give substantial evidence of their willingness to support home mining enterprise, provided undertakings be brought forward in such a manner that the system of overloading capital accounts shall be superseded, and the investors' money really applied to the working of the mines. The numerous failures of new companies during the past two years are generally attributed to the insane cupidity of the middlemen who have acted as vendors, but as the public have now become alive to the evil, and as promoters are beginning to recognise the fact that 50,000l. worth of saleable shares are better than 400,000l. worth which can only be sold at 4 or 5 percent. of their nominal value, it is hoped that with a more equitable system there will be a return of enterprise and prosperity. The market fluctuated much to-day, but closed fairly firm.

Our usual telegram from Cornwall this evening says:—During the past week the Cornish Mine Share Market has been more buoyant, with a decidedly better tone, shares generally are firmer, and there has been more inclination for business. Both Dolcoath and East Pools are strong, and close firm, the returns keeping up very favourably. Tincroft continues in request, shares have been done at 8½, and are scarce. Agars are also firmer, and there has been rather more enquiry for South Frances and Carn Brea. West Kitty continues well held. At the meeting on Tuesday a profit of 3791l. on four months' working was reported. A dividend of 12s. per share was declared. The prospects of the mine are very encouraging. At New Kitty and at Treavean United calls of 2s. per share were made. At Redruth Ticketing yesterday 893 tons of copper ores realised 265s., the standard remaining unaltered. The quantities comprised 532 tons from Mellanear, realising 1076s., and 210 tons from Levant, producing 927l. Wheal Owles is reported to be looking much better.

The Neath Harbour Smelting and Rolling Works, to the formation of which reference was made in last week's Mining Journal, has issued its prospectus, which will be found in another column. The object of the enterprise is to purchase and work the celebrated Crown Copper Smelting and Spelter Works, and the concession of the famous Gorno Calamine Mines, consisting of 398 hectares (about 800 English acres), situated in the province of Bergamo, Kingdom of Italy, and estimated to contain (without calculating new seams) 420,000 tons. A further concession has been obtained giving the right to explore over about 100 hectares of land. The capital is 150,000l., in shares of 5s. each. Divided into 20,000 preference and 10,000 deferred shares. Issue of 100,000, in 20,000 preference shares of 5s. each, bearing interest at the rate of 12 percent. per annum. Until the preference shares are called up in full the deferred shares, even when there are profits to justify it, will only receive dividends on a sum equal to the amount called up for the time being upon the preference shares. When dividends have been paid for five consecutive years on the preference shares at the rate of 12 percent. per annum, and when the dividends upon the deferred shares



have also been paid as above for a like amount and period, the distinction between the two classes of shares as preference and deferred will cease, and the dividends will be thereforeforth struck on both at the same rate per cent. The board of directors is formed of well known men of business, and the properties appear to be such as with care and energy may be made very remunerative.

The London and Middlesex Land Company, with a capital of 50,000l., in shares of 5l. each, has been formed to purchase estates, chiefly in the Metropolis, with a view to resell them in small plots, or create ground-rents on them after improvement and development. The prospectus states that freehold ground rents have been for many years in steadily increasing demand, not only on the part of the investing public, but by trustees, bankers, and insurance companies, as the security they afford renders them available for trust purposes. That building land in the neighbourhood of London must steadily increase in value is a natural consequence of the increasing population. In a recent speech made in the House of Commons, Mr. A. J. Balfour, M.P., said:—"London increased by 50,000 souls a year, so that every 12 months a vast town as big as Northampton was added to the Metropolis." As an instance of the success which has attended the principal land companies, and the good return to the shareholders, one similar enterprise is mentioned which paid 12 per cent. dividend in 1883, and half-a-dozen others which returned 10 per cent. dividend, one of the latter giving also 10 per cent. bonus. The first land acquired by the company overlooks the grounds of the Alexandra Palace, and is within five minutes' walk of Muswell Hill Station, whence Broad-street, King's Cross, Moorgate-street, and other stations may be quickly reached. It is also within the six miles radius of Charing Cross, and is accessible from the omnibus and tramcar routes, or by cab-drive from any part of the Metropolis. The road on the principal front of the estate is already constructed and the sewer laid, so that a comparatively small outlay is required in road-making and planting to develop the estate. Other estates will be purchased from time to time, and will be developed in a similar manner. After increasing their value by road-making, planting, and other improvements, it is proposed to resell them in retail portions on the deferred system of payment, and to give small purchasers every facility by granting them free conveyances, and by providing other easy terms. But where the directors deem it desirable, the plots will be let to responsible parties and ground rents created.

The Anglo-American Brush Electric Light Corporation directors are able to inform the shareholders that during the past six months further considerable progress has been made in perfecting the manufactures and in developing the business of the corporation. The excellence of the apparatus supplied by the corporation, both for arc and incandescence lighting is now generally recognised, and the corporation stands high in the estimation of the public not only as manufacturers of the highest class electric lighting plant, but also as contractors for electric lighting installations. The corporation has been successful in establishing the reputation for high efficiency of their Victoria dynamos and lamps for incandescence lighting, and their special suitability for the purpose of lighting ships. Contracts have been obtained among others from the Admiralty, after severe competitive tests, for fitting up the following of H.M. ships of war with the incandescence light—Colossus, Triumph, Raleigh, Bacchante, and Conqueror. Among the other important work undertaken by the corporation may be mentioned a provisional installation of three 500 light dynamos at Buckingham Palace, the supply of the machines for lighting the Parliament Houses at Melbourne, and the exclusive lighting of the Forestry Exhibition at Edinburgh. Although owing to the continued depression in electric lighting generally, the volume of business effected during the past half-year has not been so large as was hoped for, yet it is a satisfactory feature of the business that shipments have been made to nearly all quarters of the globe, and that there is a continuance of orders from distant countries. The directors feel that there is ground for congratulation in the fact that at present not only are all charges, ordinary and exceptional, met by revenue, but that the financial position of the corporation is such as to enable the board to undertake the important contracts which they have in view, involving further expenditure of capital, without asking the shareholders to provide additional supplies.

Devon Great Consols have been in good demand all the week, and advanced to 23 3/4. Good progress is being made at the adit shaft at the Wheal Maria part of the mine, where some important discoveries are shortly expected. In Wheal Emma, below the 205 fm. level west, the lode is worth 5 tons of mineral per fathom; and at Watson's, in the 112, the lode is producing 2 tons of mineral per fathom.

Devon Great United, 1/2 to 3/4; the 120 fm. level, east and west of Willesford's shaft, is yielding good quality of copper and mundic ores, as well as the 60, west of Watson's shaft. An increased sampling of copper ores will be made.

Dolcoath shares have been in better demand, and advanced to 71 to 74 1/2; the quarterly dividend of about 30s. per share will be paid on Aug. 18.

Drakewalls United, 3-16ths to 1/4; as will be seen in another column the annual general meeting of shareholders was held on Thursday last, and was well attended. The policy to be pursued as proposed by the directors in the development of the property was unanimously approved of. It would appear that a vigorous prosecution in depth will be carried out forthwith, in order to get under the long run of rich tin ground gone down in the bottom levels, and it is important to point out that the deeper they sink the richer will become the tin ground, approaching the junction of granite and killas formation, for it is in a similar formation to this, where the profitable tin-producing mines have been, and are still unfolding their great wealth in the Dolcoath, Camborne, and Redruth districts. This was pointed out at the meeting of shareholders by Mr. Peter Watson, the London manager, and it must be a satisfaction to the shareholders generally to find that there was such a harmonious and unanimous feeling amongst those present at the meeting with respect to the future of this property.

East Pool shares advanced from 42 to 43, 44. A quarterly dividend of 20s. per share is expected at the meeting on Aug. 11.

Kit Hill, 1/2 to 3/4; favourable progress is being made in driving the great tunnel level, 16 ft. having been driven during the past week. The north engine-shaft is now being sunk below the 100, and in the 100 west the agent reports the lode is 5 ft. wide, and yielding tin ores, as well as the 88 west.

Lead Hills have been in active demand all the week, and have advanced to 1 1/2, owing, it is said, to the fact that the bottom levels, as well as the shallower levels, are opening out valuable ore ground, and some further important discoveries are shortly expected. This, with the improved price of lead and the rumour that a profit will be shown.

Roman Gravel, 2 1/2 to 3 1/4; and said to be in demand, owing to the rise in the price of lead. A further sampling of 100 tons of lead ore has been made this week, and the agent reports that the values of the ore-producing points are equal to those at any time during the past 12 months, several of them being worth 6 to 7 tons of ore per fathom.

South Devon United, 1/2 to 3/4; the lode in Martin's shaft, sinking below the 120 fathom level, is worth 20l. per fathom, and in this level driving west, about 15 fathoms distant, is worth 12l. per fm. An increased quantity of water is now being obtained for ore-dressing purposes.

South Wheal Frances shares advanced to 8 1/2, 8 3/4, and in good demand, owing to the improvements which are now taking place at the mines, and the improving price of tin.

West Wheal Seton shares, which have been selling at very low prices for some time, are said to have become in demand at 4 1/2 to 5, as the mine is reported to be improving.

In Lead Mine Shares much more business is reported, and as the metal is fully 10s. a ton better a very encouraging feeling exists with regard to the future. A correspondent writes:—"The advance in the price of metals, especially in lead, tin, and copper, which have at last made a start from the great depression which has characterised them during the last two or three years, must be highly cheering to shareholders in mines containing these minerals, as a gradual advance is now expected by those well qualified to judge in home mining pursuits and the metal market.

Ruby and Dunderberg, 1/2 to 3/4; the weekly report is again chiefly interesting as regards the work being carried on at the Lord Bryon mine. The ore in No. 2 cave is developing fairly, and at No. 1 cave the preliminary work will soon now be finished, enabling them to commence cleaning out the bottom, where a good body of ore will probably be met with. There is still a difficulty about getting tributers to work; but some more men had been put on during the week.

The Antioquia (Frontino) Company's statement of profit and loss for May shows:—"The attle and sand crushed produced 70 ozs. gold, the estimated value of which, including exchange, was 198l. 3s.; whilst the cost at the mines, at Medellin, and in London, was 285l. 7s.; leaving an estimated loss of 87l. 4s., in addition to 300l. spent on capital account.

The Frontino and Bolivar statement of profit and loss for May shows that 2632 tons (of 20 cwt.) from general mines produced (average 15 dwts. per ton), 2033 ozs.; gold bought, 115 ozs. = 2148 ozs. The estimated value of the gold, including exchange, was 6108l. 6s.; cost of the mines at Medellin and in London, 5107l. 9s.;

monthly allowance for freight, commission on gold sales, and sundry fluctuating outlays not immediately ascertainable, estimated at 250l.; paid for gold bought of tributers, 227l. 5s. 5d. = 5584l. 14s. 5d., leaving an estimated profit of 523l. 11s. 7d. Mr. Franklin White reports:—"The water supply was good and the mineral crushed was on the whole of better quality. The Tigrillo, Rosario, and Cordoba mines gave good produce, Silencio, San Joaquin, and Palmichala improved, but Cecilia and Salada were not good. The cost rose as I had expected. The extra cost department was high, due to cross-outs in Silencio and Cordoba, where good work was done, and in Palmichala, where unfortunately the ground was very hard. There was a considerable increase in the laboratory department, where a new furnace is being put up with the intention of smelting pyrites. The rains have been heavy lately, and the ditch has suffered somewhat, but not to an extent equal to that of last year. The heavy rains have ceased (by the 17th), so I hope that we may have a steady supply of water, which will assist us greatly in getting returns."

The London and South African Exploration Company have advice of remittances amounting to 7100l. for the last four weeks, making with the 28,070l. previously advised a total of 35,170l. for 32 weeks.

The Town and Country Bank (of Adelaide, South Australia) have opened a branch in London, under the management of Mr. Henry D. Cook.

The Railway Share Trust Company have received telegraphic information from New York that "Outline plans for re-organisation of the Wabash, St. Louis and Pacific Railroad were mailed on July 30."

The interest warrants for the half-year ending July 31, on the Six per Cent. B. or Preference shares, of the Railway Share Trust Company (Limited) have been posted.

The Waterloo Mills Company, Hull, directors have declared a dividend for the past half-year at the rate of 15 per cent. per annum, passing 2500l. to reserve, and carrying forward 513l. 3s. 5d.

The Merchant Banking Company, of London, directors at a board meeting on Thursday declared an interim dividend at the rate of 6 per cent. per annum for the half-year ended June 30, payable on Sept. 1, and out of the profits of the half-year have made provision for an exceptional loss incurred during that period.

OSCAR GOLD MINE.—The following letter dated July 25 has been received from Capt. Daw, the managing director in Norway, and will, no doubt, be read with interest by shareholders:—"I have this day been over all the lodes granted to us, and I am pleased to inform you our prospects look very satisfactory indeed. In washing samples every day gold is found in nearly every one. A sample I saw this morning washed from Hanson's showed splendid gold. This lode with many others when the property was sold to the company was not known. All the gold that we have got broken since you were here is from other lodes, not from Oscar shaft. There has not been anything done towards sinking yet. It will take 14 days or three weeks before sinking will be commenced. In my son's report of last week the produce given of the different samples some were high and some were low. I beg to inform you these samples were all taken very near the surface; in fact, some were from the surface, and to-day when I inspected the different places I was surprised at the results. It certainly appears now we shall have a great mine here. Respecting the machinery the drawing engine will be ready in 14 days. The large engine boiler is fixed in its place, and the masons are busily engaged in building the flues and brickwork around it. This I expect will be completed in about 10 days. There is a lot of work done towards the stamps and floors; in fact, I did not expect to see things in so forward a state. I wish you had come with me; I feel sure you would have been pleased."

BRATSBURG COPPER MINES.—Mr. Albert Daw writes under date July 22:—"I have the pleasure to inform you that two peasants living near Gulnas have written here to say they have discovered the old level on the mine said to have been hidden away by the old German miners within the period 1780—1790. They state in their letter that they have worked a couple of days to clear away the rubbish, and have come down on a wooden roof covered with clay. According to report this level was the richest part of the Gulnas Mine. I have requested them to let me know on what part of the mine it is situated, and on receipt of their reply will let you know what we think of it. Murchison's engine will be started in a few days, the skip-road being nearly ready. The parts of the steamer are at last sent off from Moss. It will probably take nearly two months to build and paint it."

DEVON FRIENDSHIP.—An official circular has been issued, in which it is stated that out of the 350 shareholders in the company, about 70 have already agreed to take nearly 8000 of the 1l. shares to be issued at 10s. discount, payable by instalments of 1s. each, and entitled to one-half of the net profits available for dividend, provided the whole 20,523 are subscribed for. It is pointed out that the property is a most valuable one, where discoveries have not got to be made, but with large available resources only waiting for the necessary machinery to return great profits. With the water drained from the old mine there would be immediately found broken and laid open hundreds of thousands of tons of most valuable produce, which has lately advanced considerably in price, and is likely to continue to do so. With the requisite moderate amount to erect machinery, the undertaking is as far removed from a speculation as almost anything can be.

GOLD AND SILVER.—Messrs. FIKLEY and ABELL (July 31) write: With a continuance of orders for gold, prices have been well maintained. The Bank has sold, in bars, 40,000l. for India, 33,000l. for Paris, and 150,000l. in sovereigns for Canada. The total received is 37,000l., in coin from South America. The imports are 11,500l. from Australia; 39,000l. from the West Indies; 30,200l. from the River Plate; total, 80,700l. The exports by the Peninsular and Oriental steamers amount to 95,000l. Silver has slightly hardened since our last, and the arrival by the Royal Mail and Pacific steamers were sold at 50 1/2d. To-day, with rather firmer rates from India, we quote 50 1/2d. The imports are 53,700l. from New York; 29,200l. from the West Indies; 42,000l. from Chili = 124,900l. The Peninsular and Oriental steamers take altogether 166,500l. to India. Mexican Dollars to the amount of 79,700l. came to hand by the Moselle, and these were sold at 50 1/2d., a slight reduction on previous rates, and we give this as to day's quotation. The Peninsular and Oriental s.s. Shannon takes 101,500l. to China and the Straits. The quotations for bullion are: Bar gold, fine, 77s. 10d. per oz. standard; bar gold containing 20 dwts. silver, 77s. 11 1/2d. per oz. standard; bar silver fine, 50 1/2d. per oz. standard; bar silver, containing 5 grs. gold, 51 1/4d. per oz. standard; cake silver, 54 1/2d. per oz.; Mexican dollars, 50 1/2d. per oz.; quicksilver, 5l. 6s. 6d. Discount, 3 per cent.

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### Notices to Correspondents.

**CAVEAT EMPITOR**—"W. T. R." (West Hartlepool).—We understand that if a draper sells calico at 9d. per yard, whilst rival shop-keepers are selling a precisely similar article for 3d. per yard, the customer who purchases at 9d. per yard has no ground of action against the draper, because the said draper has taken 6½d. instead of 3½d. per yard profit. The customer cannot plead that he did not know the value of calico when he purchased. Similarly you, as a draper, cannot claim a return of part of the price you have paid for a mine share because you "know so very little about these matters," even if you have bought at a high price. The shares mentioned on the date named were quoted at no other price than that given in the back page of the *Mining Journal*, but sellers were no doubt taking more than 6½d. profit. We cannot, however, determine whether you "have been fairly dealt with."

**WEST CALLAG.**—I should be glad of any information that can be published as to the West Callag Gold Mines, their present condition, and the future probabilities of any return to the shareholders. The shareholders have not had any information whatsoever for a very long period, and when they had it was not worth much. The shares are all paid up, and I see them quoted for a considerable time past at 75 to 80 per cent. discount.—A. B. S.: *Dublin*.

**NORTH PENSTRETHAL.**—It is a great disappointment to all concerned that the main lode of this mine should have recently been cut poor in the bottom level—only 2 ft. wide, and no mineral. But is it the main lode at all? Is it not rather one of the branches cut in sinking the engine-shaft? This would easily be ascertained by extending the cross-cut a little further north. I firmly believe that this would result in a good discovery.—B. J.: *Holford*.

**Received.**—"D. C. D.": Next week—"A. J. W." (Risinghill-street): Rather too strong. If 15 or 20 years have been found necessary to mend a water-wheel it ought to require a still longer period to raise more money to continue operations—"J. T." (Gold Coast): Thanks—"W. G." (London and Middlesex Land): Referred to in news columns—"S. N. C.": Thanks; inserted.

## THE MINING JOURNAL,

Railway and Commercial Gazette.

LONDON, AUGUST 2, 1884.

### THE CYCLES OF DEPRESSION AND PROSPERITY.

The connection between pigs and panics is scarcely more obvious than that between mathematics and mine shares; yet, by carefully studying pig-iron, hogs, and corn, simultaneously with cotton, provisions, and panic, an Ohio farmer—Mr. SAMUEL BENNER—has been able to deduce rules, which, if not absolutely reliable, are likely to prove interesting and useful to both speculator and man of business. It must, of course, be admitted that when one makes the assertion that "FATIMA's cruel husband was a miner, but did not work in a copper mine," the belief in the assertion will depend to a large extent upon the credulity of the person to whom the statement is made, or rather to his ability to regard imagination and fact as identical. An American physician of some celebrity—Dr. JACKSON—affirms that blue hair has been observed frequently in cobalt mines and in indigo works, whilst green hair occurs amongst workers in copper, so that as FATIMA's husband had a blue beard it is fair to assume that he was a miner, and that he was not a copper miner because his beard was blue and not green. But the arguments which support "BENNER's Prophecies of Future Ups and Downs in Prices. What years to Make Money on Pig-iron, Hogs, Corn, and Provisions," are even more conclusive than these, and he is moreover, able to show that prophecies published seven years ago have proved wonderfully accurate. Now, the question is whether a similar process cannot be commercially and usefully applied to secure fortunes for investors and speculators in mine shares, for the whole secret of success seems to be contained in Mr. BENNER's beautiful imitation of SHAKESPEARE, in the metre of some of the later poetry of TENNYSON:—

"There is a time in the price of certain products and commodities,  
Which, if taken by men at the advance  
Leads on to fortune;  
And if taken at the decline leads to  
bankruptcy and ruin."

It will be noticed, says Mr. BENNER, that the great majority of the business men of broken down fortunes have become so, not by accident, but by dealing too largely when prices were on the decline. In the general declines of business after the panics of 1819, 1837, 1857, 1873, the loss to the nation through non-employment of labour and in various ways is estimated to aggregate a sufficient sum to pay our national debt. GEORGE PEABODY laid the foundation of his fortune by buying American securities in one of our commercial depressions, the price taken at the advance led him on to competence. The whole history of trade and commerce is full with the records of disaster which has been brought about by the mistakes of men who could not read the letters upon the sign posts, while on the other hand our libraries are crowded with the chronology of man's success in business and trade by taking the price and times at the advance. Within the present century the increase of knowledge improvements in machinery, and the discoveries in the arts and sciences, have advanced with a speed unparalleled in the annals of history. New light in various departments of human activity is now rapidly and continually breaking in upon the world. Each rising science has fought and struggled with superstition and ignorance, and in all ages no effort has been spared to blast them in the bud of their being or crush them in the cradle of their infancy.

The axiom, "History repeats itself," implies a cyclical movement in human affairs, and as it is a generally received opinion that everything moves in cycles, especially in Nature, Mr. BENNER, judging the future by the past, predicted that the average price of hogs would decline in 1876 and 1877, that it would rise in the three succeeding years, and fall again from 1880 to 1883, which predictions were fulfilled with curious accuracy, and the diagram which he gives shows an extraordinary uniformity in the cycles of variation. Commencing with 1847 the years of highest prices are separated from

each other by intervals of six years, five years, six years, five years, and the years of lowest prices commencing with 1850 are similarly separated, but the figures run five years, six years, five years, six years, and so on. In pig-iron the intervals between the years of highest prices, commencing 1837, are eight years, nine years, 10 years; eight years, nine years, 10 years, and so on; whilst the intervals between the years of lowest prices, commencing 1834, are nine years, seven years, 11 years; nine years, seven years, 11 years; and so on; a still more extraordinary circumstance being that where the highest price interval is eight years it includes six years fall and two years' rise; the nine year intervals including five years' fall, and four years' rise; and the 10 year intervals including seven years' fall and three years' rise. In cotton, stocks, and the weather, the cycles are equally clearly marked, whence it would certainly seem that the future can be predicted from the past by the application of Mr. BENNER's rules with reasonable accuracy.

Why then should not the future of high prices for any given metal, or for mine shares be predicted by the adoption of a similar system, although, of course, the nature of the cycle applicable in each case would have to be ascertained. How this could be done could readily be learned from Mr. BENNER's book, the third edition of which has just been published by Messrs. ROBERT CLARKE and Co., of Cincinnati, but in the meantime as it is now admitted that both metals and mine shares are at their lowest speculators who desire to become the embodied historical repetition of GEORGE PEABODY's fortunate purchase, would probably do well to avail themselves of the present opportunities which daily present themselves. They should be well advised before they operate, buy only what can be purchased at a nominal price, and risk no more than they can well afford to lose; they will then, in all probability, be so well rewarded as to be thoroughly satisfied with the result.

### THE RATING OF MINING, AND OTHER MACHINERY.

The rating of mining and manufacturing machinery has been a long-standing grievance, and few persons, single-handed, have cared to risk the cost, annoyance, and loss of time in appealing to the higher courts against the decisions of assessment committees. It would appear, however, from the annual meeting of the Employers' Iron Trade Association, a report of which appeared in last week's *Journal*, that the Leeds and Manchester districts leading firms have combined to appeal even to the House of Lords if necessary. Nobody has felt the inequalities of rating more than mineowners, for in scarcely any two districts is the basis the same. In one district in the North Riding there is no fixed rule for determining the rateable value, it being left to the discretion of the overseers. In another district in the same county, in assessing ironstone mines, the assessment committee value the ore according to the quality at so much per ton, clear of all deductions, whilst the machinery and plant is taken according to estimated value. At Llanidloes and Newton, where the dues are reserved in kind, the engines, machinery, &c., are separately rated. In such cases a deduction of 15 per cent. is made for repairs, insurance, and other expenses. In another union, where a large tonnage of coal is raised, the basis is taken to be the produce of the mine in tons per annum, charged at a "proper" royalty, according to the circumstances of the case, plus an additional amount for the rent of the shafts, engines, and other fixed plant used in the production of the mineral. What is required is something approaching uniformity, and as near as possible to its actual value for the work it performs. As it is, the rating of machinery, in some districts at least, is excessively high. It is, therefore, to be hoped that mineowners and other users of machinery will act together with a view to secure uniformity in the rating of such plant, which can only be effected by Legislative interference, seeing that the existing anomalies have lasted too long, and no disposition shown to even partially alter them.

### MINING INDUSTRIES OF IRELAND.

We briefly alluded a fortnight since to the mining industries of Ireland, and the little attention that was paid to the valuable and extensive mineral deposits of that country. In different parts of Ireland there are deposits of copper, lead, manganese, antimony, blende, cobalt, nickel, arsenic, silver, gold, coal, &c.; but the production of any of these is comparatively trifling considering their extent, while some are altogether neglected. Some 250 years ago mining in Ireland in some branches was even better than it now is, for then the iron ores were smelted where they were found, and with the local coal. But, even of late years, the mining industry of Ireland has become paralysed, and the existing state of things is certainly not so favourable as could be desired for inducing capitalists to develop the mineral wealth spread so abundantly on all sides. The ironstone deposits are most extensive, covering a large area, but are only worked to a limited extent. In the north the clay ores of the coal measures are intrinsically valuable as regards both quantity and richness in iron. They were formerly smelted at the Arizona Ironworks, on the shores of Lough Allen, and it is expected by those resident there that they will be again. They would certainly well repay the erecting of furnaces for smelting, as they give an average of 51.36 per cent. of protoxide of iron, and 40.2 per cent. of metallic iron. In connection with the Antrim coal field there is excellent blackband ironstone, which has been extensively mined, and, being calcined on the spot, has been sent to the furnaces of MERRY and CUNINGHAM, on the opposite coast of Ayrshire. There are several copper and lead mines in different parts of Ireland, but during the last three or four years these have not been worked to anything like the extent they were when the country was in a quieter state. Plentiful as coal is, at least *in situ*, comparatively little is raised, all the leading towns depending upon what is sent from England and Scotland. A few years ago iron pyrites from the sulphureous were more extensively produced in Ireland than in any other part of the kingdom, the output being about one-third of all that was raised in the kingdom; but nothing like this has been turned out of recent years. It is the same with respect to almost every kind of metal and mineral known in Ireland. There appears to be not only a want of enterprise locally, but a disinclination on the part of workmen to engage in mining operations.

The falling-off in the leading mining industries in Ireland will be seen from the following figures, showing the values of the material produced in the years 1874 and 1883, an interval of 10 years:—

	1874.	1883.
Copper ore .....	£ 72,096	£ 1,348
Lead and silver ore.....	21,059	3,397
Iron pyrites .....	19,451	6,394
Iron ore.....	112,089	30,838
Coal .....	69,606	57,258
Salt .....	13,950	13,864

Total .....

There is fully the same difference as regards most other minerals raised in the two periods. The consequence is that now more than ever the valuable minerals are neglected in Ireland, and more dependence placed upon a rough and ready system of agriculture, and which when there is an unfavourable season leads to something closely approaching a famine necessitating public aid.

**DURATION OF IRON AND STEEL RAILS.**—The Grand Central Railway of Belgium has, says *La Metallurgie*, taken account since 1865 of the number of iron rails, and since 1869 of the number of steel rails, withdrawn from the railway lines, as well as their ages. With reference to iron rails, the figures given in the report show that the renewals are made gradually each year, starting from the first or the second year, and are nearly complete at the end of 15 to 20 years. On the other hand, all the steel rails laid down since 1869 have shown, up to the close of 1881, only an insignificant proportion of renewal, and it was the same in 1882, except for the rails laid in 1869. These latter were 820 in number. One only had to be withdrawn before Jan. 1, 1882, on account of accidental fracture; 257, that is to say, 48.3 per cent., had to be replaced in 1882, because the wear had reached 13 mm. (25 mm. = 1 in.), a limit which the profile

of the rails would not permit to be exceeded. These facts confirm the opinion which is entertained concerning steel rails; they wear away regularly, while iron rails perish by scaling off beneath the wheels before being worn out, and after a very variable number of years. It was not supposed, however, that this wear of the steel rails could be so uniform that one-half of the rails laid at the same time would have to be replaced exactly the same year, to be followed probably very soon by the other half; but such, as we see, is the case. Another result, equally satisfactory, is the length of time which these rails lasted, having regard to the circumstances. These rails, it is true, have only lasted 13 years; but under altogether exceptional conditions of wear and tear. They were, in fact, placed on an incline of from 18 to 22 mm., over which there passed each day, with brakes on, 30 heavily-loaded trains. It will be sufficient to add that on this section of the line ordinary iron rails only lasted three months; hammered rails manufactured at a well-known and high-class German works had to be replaced one-half at the end of a year and completely at the end of three years. A duration of 13 years under the conditions indicated represents a movement of 130,000 descending trains—that is to say, under the hardest conditions from the point of view of wear and tear. The average weight of these trains probably exceeds 250 tons gross—the average weight of all the luggage trains of Belgium—so that these rails have probably resisted the wear of 35,000,000 tons gross descending an incline of about 1 in 50.

### SCOTCH PIG-IRON WARRANT MARKET.

Mr. W. WILSON (Glasgow, July 31) writes:—The warrant market is without change, and the price is almost stationary. A very sluggish trade is doing, and with little appearance of improvement; but prices are now so low that a further fall of even a shilling or two would probably compel the blowing out of many furnaces. Shipments are again small for the week. One furnace has been put out at Langloan and one at Shotts Works, making the number blowing 94. 380 tons were taken out of store here last week, and 126 tons at Middlesbrough. Business was done during the past week at the following prompt cash prices:—

Following prompt cash prices:—				
Thursday, July 24.	Friday, July 25.	Monday, July 28.	Thursday, July 31.	Friday, July 31.
41/3½	41/3½	41/3½, 41/5	41/3½, 41/5	41/3½, 41/5
Tuesday, July 29.	Wednesday, July 30.	Thursday, July 31.	Friday, July 31.	Friday, July 31.
41/4½, 41/8½	41/8, 41/4½, 41/5½	41/5, 41/7½, 41/8½	41/5, 41/7½, 41/8½	41/5, 41/7½, 41/8½
	1884.	1883.	1882.	1881.
Price of Scotch Warrants, July 28.....	41/4½	47/7	50/9	49/8
Furnaces in blast in Scotland do. ....	94	115	109	119
Iron in store at this date .....	587,650	584,558	633,495	573,570
Shipments of Scotch pig-iron for {	10,315	14,058	13,116	9,285
week ending July 16 .....	325,154	367,481	385,515	323,317
Do. since beginning of year .....	367,481	397,481	397,481	397,481
Price of Middlesbrough, No. 3, July 28	99	117	119	118
Furnaces in blast Middlesbrough dist.	99	117	119	118
Middlesbrough Iron Imported at {	3,790	4,210	4,698	5,615
Grangemouth, week ending {	150,164	154,694	128,240	173,529
July 26 .....				
Do. do. since beginning of year .....				

### THE DEVONSHIRE EXCURSION OF THE GEOLOGISTS' ASSOCIATION.—No. II.

Last week's report brought the record of the excursion to the evening of Thursday, upon which day the granites and other rocks of the south-west corner of Dartmoor, and of the altered Devonians adjoining, were carefully investigated. On Friday Brent Tor and its vicinity formed the subject of study. Continuing the previous day's work, the party followed up the edge of the moor to Lydford, and completed their necessarily rapid survey of its borders by the examination of the eruptive rocks on and around Brent Tor. This tor has attracted notice from the very earliest dawn of geological science. Its peculiar peaked shape, which in ancient times caused it to be selected as the site of its quaint little church, and which has connected its history with myth and legend, has always given it a character of its own among Devonian heights. Sir Henry de la Beche seems to have been the first observer to form an unequivocal opinion as to its volcanic origin, now something over 50 years ago, and in his report he remarks:—"The idea that in the vicinity of Brent Tor a volcano had been in action, producing effects similar to those produced by active volcanoes from a similarity of causes, forcibly presents itself. That this volcano ejected ashes, which, falling into adjacent water, became interstratified with the mud, silt, and sand there depositing seems probable. That greenstones and other solid trappean rocks constituted the lavas of that period and locality seems also a reasonable hypothesis. Upon the whole, there seems as good evidence as could be expected that to the north and north-west of Tavistock, ash, cinders, and liquid melted rocks were ejected, and became intermingled with mud, silt, and sand during this geological epoch, corresponding with the phenomena exhibited in connection with volcanoes of the present day."

One of the Memoirs of the Geological Survey was devoted to the "Eruptive Rocks of Brent Tor and its Neighbourhood." In this work Mr. Frank Rutley, F.G.S., took up the record of this volcano from the petrological side, and came to some very important conclusions. Sections were cut of all the leading varieties of rock and examined microscopically, the result being their identification as distinctly volcanic—pumice, breccia, rhyolitic breccia, devitrified rhyolite, scoriaceous lava, decomposed basalt lava, pitchstone, and various forms of basalt in different stages of alteration. Mr. Rutley likewise examined the eruptive rocks of the district generally, and identified amphibolite bordering the granite of Brazen Tor, gabbro at White Tor, Smead Ridge, and Cocks Tor, schistose ash at Kilworthy, Hurdwick, and Milton Abbot, amygdaloidal ash (schalstein) at Churlhanger, and decomposed greenstone at Grestone Bridge—most of them having been previously classed under the useful general head of "greenstone."

This monograph, however, does not contain Mr. Rutley's last published views as to the stratigraphical relations of the Brent Tor volcanic series. These are to be found in a paper read before the Geological Society. Here he points out the downthrow of the existing portion of the old volcano between two faults; that by far the greater portion of the cone has been long since removed by denudation; and that a considerable portion of the downcast must also have disappeared, leaving what is by comparison only a mere mole hill. But the most important suggestions in this paper are based upon lithological similarity between undoubtedly Brent Tor rocks and the schistose lavas and ashes of the Saltash district. These, he suggests, may belong to the same series, from which it follows either that the Saltash rocks are wrongly classed as Devonian, or the rocks around Brent Tor as carboniferous. But there is no doubt whatever that the Saltash rocks are Devonian; and Mr. Worth has, since Mr. Rutley's paper was written, shown that any argument based upon the volcanic rocks of the Saltash area must apply also to those of the Plymouth district, into and through which the traps and bands of the Saltash area continue.

As the matter stands, however, this can only be taken as a suggestion. Much closer and more detailed mapping is necessary than has yet been possible. It is also most desirable, where possible, to obtain the testimony of paleontology. While, therefore, it is highly probable that the frontier line between the carboniferous and Devonian rocks must be removed from about the horizon of Tavistock at least to that of Lydford, the point is one that will continue for some time a partially open question. It was decided before making for the station for the Tor a visit ought to be paid to the most notable feature, whether geological or scenic, of Lydford itself—the Gorge. And this, through the ever-ready courtesy of Mr. Daniel Radford, was done. On leaving the train, therefore, the party were conducted direct to Lydford Bridge, where they were admitted to the depths of this famous recess. So far as we were aware, no authoritative opinion has ever been expressed as to the origin of this historic cleft, though there has seemed no reason to regard it as other than a fault fissure, or shake worn into its present configuration by the action of the river. It was pointed out by Mr. Worth that it did not stand alone, but was part of a network of ravines by which Lydford was so hemmed in and defended that it could be approached from its own level on the moorland at one point only. Moreover, the Gorge, though the most beautiful and striking, was not the most prominent feature in the configuration of the locality. As to the strata, though



did not care to commit himself to a definite opinion he saw as yet reason to doubt the correctness of their assignment as carboniferous. The party were enthusiastic in their admiration of the Gorge, which was pronounced unrivalled in its way as an example of erosive action, and Dr. Hicks, accepting the view of Mr. Worth as to the position of the fissure, pointed out that its present configuration was due to the cross-jointing of the rocks, which afforded points of lesser resistance, and thus allowed the water to scoop out these peculiar flows which are to be seen, not only at its bottom but on its sides. A more beautiful example he had never seen, and it alone was well worth the whole excursion. Near the Gorge the keen eye of Dr. Hicks also detected a small dyke, which turned out to have been eroded into a chloritic mineral. From Lydford it is a stiff pull, nearly all up hill, of some three miles to Brent Tor, the most tedious and uninteresting part of the programme, with only a casual "ash" to enliven it, but the Tor once reached the main business of the day was to begin; and the leading features of this remarkable volcanic ash were well examined during a stay of nearly a couple of hours. From the Tor itself the route lay near North Brent Tor to Mary Py, where it had been arranged that the start homeward should be made. Time and opportunity, however, were afforded for a visit to Wheal Friendship, the huge "burrows" of which it was thought might possibly yield a few minerals of interest, and to the extension thenceward of the "gabbro" of Smear Down, White Tor, and Black Tor.

The day proved to have been well spent in more ways than one. The weather was everything that could be desired, and the views from the Tor magnificent. Geologically it was made memorable by the fact that organic remains were for the first time found in the slates of the area; and that, however much older the rocks whence Brent Tor rises may be, they certainly are not carboniferous. This is the step, then, towards the settlement of a problem which will effect wider conclusions when it is fully worked out. Another was given on the detection of bands of grits among the slates on Black Tor. The visit of Dr. Hicks (whose keen eye was invaluable) and friends has thus been of the greatest service to the elucidation of the geology of this part of Devon, which may now take a new departure. The turning over of the burrows at Wheal Friendship resulted in the discovery of some excellent specimens of minerals, among the rarer was allophane, and a beautifully crystallised mineralising some cavities which at first puzzled the mineralogists present, but was at length unanimously pronounced to be celestite.

On Saturday the excursion was brought to a close by a visit to the Moor Clayworks, where Mr. W. L. Martin, who acted as guide, conducted the party round the works, and explained, not only the technical characteristics, but a number of highly interesting scientific features. The great pit, which is now over 120 ft. in depth, was originally worked very shallow; and it is entirely owing to the enterprise of the Messrs. Martin, who drove a level from the side of a hill some half-mile in, that the works have assumed their present enormous proportions. This level, though three "core" of men were engaged on it, took nine years to execute. Some of it was through exceedingly hard ground, and some (and this gave the most trouble) through very loose ground. For a considerable distance it followed a line of a flookan or cross-course, which extends from end to end of the pit, and seems now as if it had reached a termination—if so, very remarkable fact. In the course of driving the level several interesting minerals were found, and Mr. Martin had thoughtfully arranged a series of these for the inspection of his visitors. They included beautiful specimens of opal and jasper, an example of tobernite—one of our rare minerals—and some magnificent crystals and stones of tin, found at the intersection of the lodes and a cross-course. Although there are several lodes in the sett, the quantity of tin they contain is so small that Mr. Martin said he was perfectly astonished at the amount of work the old tanners must have done on that very spot for what could only have been very meagre results. The inspection of the pit section proved a matter of great interest, not only from the illustration of the way in which clay was wrought by the operation of judiciously directed streams water down the faces of the slopes, but from a scientific point of view. The various lodes were clearly seen traversing the opposite side of the huge excavation. The largest clay pit proper in the kingdom, at Lee Moor, is far and away the largest works. Mr. Martin indicated the course of the flookan and its effect in "heaving" lodes. One lode had been carried some distance along with the clay before it started on its own course again. He also showed the position of the best runs of clay and their peculiar relation to the lodes and a cross-course, and this opened up several very important scientific points for discussion as to the origin of the clay in the decomposition of the felspar. From the pit the party were conducted to a place where the junction of the granite and the slate was to be distinctly seen, obtaining on the road some specimens of a novelty in form of a rock composed of schorl and felspar. The striking contrast of black and white led to the humorous suggestion that it had a name: there could be none better than magpige. The rain descending so heavily when the junction was reached that practice forbade any lengthy or detailed examination, but Dr. Hicks was able to satisfy himself of the general correspondence with the sections traced on the previous Thursday—an important factor in the generalization.

The next point was the mouth of the level where the milk-white rent comes rushing forth charged with the clay from the slopes, rising at such a rate that it brings along stones of considerable size. Its course is soon checked, however, with the great girdiron of the strips, with their six-fold division. It flows on peacefully enough from them, leaving the mica which had been in suspension to settle into the depositing pits, which form a double tier, immediately above the collecting tanks. The latter again communicate with the "drys," when the water is driven off from the clay—by a time a thick paste mass—by the agency of flues passing under the shallow-tilted pans into which it has been allowed to run. When efficiently dry, as Mr. Martin explained, it was cut into cubes, and dried under sheds, preparatory to being loaded into wagons, which convey it along Messrs. Martin's private tramroad to their quays at Mira Bridge. All the stages in the production of the day were followed and explained; and Mr. Martin showed also the range of the (which there was no time to visit) in which the ready refuse of what used to be considered as such—is made into fire-bricks and tiles.

Very hearty was the thanks tendered to Dr. Hicks, on behalf of the Association, to Mr. Martin, who in response, said he was always glad to afford an opportunity of showing the works to those who had an interest in them. Plymouth was reached after a wet drive of about 2 P.M., and the "long excursion" of 1884 came to an end, leaving only pleasant memories behind it.

#### FOREIGN MINES AND ENGLISH MANAGERS.

The trial of the action of the Callao Bis Gold Mining Company v. Jones, which has been before Mr. Justice North in the Chancery Division for several days past was brought to a conclusion on Thursday night. The plaintiffs sued for the recovery of certain amounts due to the defendant in the company's accounts for household expenses for himself and staff in Guayana, Venezuela, which allowances were not included in the company's agreement. The defendant pleaded ratification of his acts by the directors and the custom of the country, and further counterclaimed for the balance of salary due to him on his agreement, and 5000*l.* damages for illegal dismissal from his office as engineer and agent for the mine. Mr. Barber, Mr. Latham (instructed by Messrs. Heritage and Co.) were counsel for the company, and Mr. Treve Edgcombe and Mr. Todd instructed by Messrs. Lewis and Lewis appeared for the defendant. Mr. the company, Mr. Davis (a director), Mr. Ronaldson (the Chairman), and Mr. Thornton (the secretary), were called as witnesses in support of the plaintiffs claim, and for the defendant, Mr. Downes (his wife, and Mr. Scottburgh (the accountant in Venezuela) gave evidence that the accounts had been approved of, and Mr. Wright (secretary of the Chile Gold Mining Company) to the effect that the custom of the country sanctioned these allowances being made. A long correspondence between the defendant and the board was produced, showing acts of insubordination, on which the directors jus-

tified their dismissal of the defendant, while for the defendant it was pleaded that his acts were justified by certain proceedings which had been taken in Venezuela, consequent upon a disagreement between the defendant and Mr. Davis, who had been sent out by the board at the instigation of the defendant to report on the workings of the mine. [The learned Judge in an elaborate judgement ordered a declaration to be made of the account (which will be gone into in chambers), dismissed with costs the defendant's counter claim in respect to damages, and ordered the payment of his salary up to the time of his dismissal. The Judge further added that there was nothing in the evidence to show that the defendant had wilfully intended any irregularity in the mode of keeping the company's accounts? and Mr. Barber, on behalf of the company, intimated to the Court that in making this claim upon the defendant the company desired no imputation whatever to be made upon the engineering ability of the defendant.

#### SHAREHOLDERS' SMELTING COMPANY. NEATH HARBOUR SMELTING AND ROLLING WORKS.

The almost fabulous profit realised by the smelters has been a subject of constant complaint among miners for many years past, and the suggestion that the miners should smelt their own ores and thus secure their fair proportion of that profit has frequently been put forward, especially in times of depression, when the miners, of course, feel the hardship of their position more acutely than when the metal trades are prosperous. The suggestion has hitherto not been carried out, owing probably to the circumstance that few were disposed to subscribe the necessary funds with the knowledge that they must await profits during the comparatively lengthened period required for the erection of the works. On the Continent the system of combining the mining and smelting business is quite common, and the results are almost invariably satisfactory, and the first substantial test of the principle in this country has certainly been most encouraging. The Cape Copper Company felt that they were not obtaining so good a price for their ore as they were entitled to, and, therefore, availed themselves of the opportunity of purchasing an existing copper works in South Wales, and during the first year of its smelting operations, and upon the smelting of only half their ore, they obtained a profit equal to the total sum paid for the purchase of their works, an equally favourable effect being produced upon the market price of the shares, the comparison of the quotation at the time they commenced smelting and at present, showing an improvement of fully 50 per cent., whilst such is the prosperity of the concern at the present time that the last quarterly dividend and bonus paid amounted to 30*s.* on the *£*1 share, being at the very satisfactory rate of 75 per cent. per annum, which, by the way, was paid free of income tax.

A similar enterprise is now about to light up its furnaces, and it is confidently believed that the results will be equally satisfactory. Within a mile of the Cape Copper Company's Works, just referred to, are the celebrated Crown Copper Smelting and Spelter Works, and these are now to be taken over by an influential company—the NEATH HARBOUR SMELTING AND ROLLING WORKS—to the formation of which, with a capital of 150,000*l.*, in shares of 5*l.* each, reference was made in last week's *Mining Journal*. The purchase includes the Crown Works, and the concession of the famous Gorno calamine mines, about 800 acres in extent, and situated in Italy, in the province of Bergamo; they are estimated to contain, without calculating new seams, 420,000 tons of ore, whilst a further concession gives the right to explore over about 200 acres more. It will be seen from the prospectus in another column that it is now proposed to issue 100,000*l.* of Twelve per Cent. Preference Shares of 5*l.* each, one-fourth of the amount being payable up to allotment, and the balance as required, whilst the statement of expenditure and returns shows that not only is there ample to cover the preferential 12 per cent., but to yield 12 per cent. for the deferred shares; and a further 12 per cent. on the two classes (for they both rank equal after each has received 12 per cent.) of shares, and still leave a surplus of about 11,000*l.* per annum available for dividend, reserve fund, sinking fund, or otherwise for the benefit of the shareholders. The aggregate purchase money for the copper and spelter works, and the interest in the calamine mines is 85,000*l.*; whilst Messrs. Horne and Eversfield, in their report on the copper and spelter works alone, estimated that "not far short of 100,000*l.* must have been expended upon the works," and that Mr. F. Bennet, C.E., places a present value on the property of "110,000*l.*, exclusive of 20 acres of land suitable for building purposes."

The Neath Works are admirably placed for easy and cheap transport, having over two-thirds of a mile quay frontage in Neath Harbour, at which vessels of large tonnage can discharge ore direct into the works, thus avoiding the great expense incident to transhipment and lighterage incurred by nearly all the other smelting works in the kingdom. In addition to the dock frontage the works are intersected by the Great Western Railway and by the Tennants Canal, both of which communicate with the New East Dock, Swansea. Neath Harbour possesses also complete connections with the Great Western Railway, the Neath and Brecon Railway, and the South Wales Mineral Railway.

The coal used in the smelting operations is obtained from a colliery immediately adjoining, and is delivered direct into the works over self-acting inclines, thus effecting a great saving in carriage. The works and about 33 acres of land are held under a lease, of which 43 years are unexpired, at a ground rental of 495*l.* per annum. There is ample space for extension of the works beyond those improvements now in contemplation. At the present they are capable of turning out 10,000 to 20,000 tons per annum, according to the percentage of ores treated. The directors propose to erect a complete set of rolling-mills, with all the necessary appliances of the best description, which when erected, will enable this company to earn greatly enhanced profits. Spelter or unwrought zinc is largely used in the form of sheet zinc, and for galvanising iron, also for the purpose of manufacturing yellow metal, brass, &c. The large consumption of spelter is well known, yet the manufacture has been so much neglected in this country that a large proportion of that used is of foreign make; so that it is reasonable to suppose that a company smelting in Great Britain the zinc ore from its own mines could scarcely fail to realise large profits from that source alone.

With regard to the Gorno mines the concession is granted in perpetuity by the Italian Government, subject to a fixed yearly tax of 8*l.*, and also 5*l.* 12*s.* per annum out of the profits of the workings. Carriage of the ore from the mines to Genoa, including the cost of putting the ore on board vessel, is 18*s.* per ton, and, together with the cost of extracting and of calcining, is calculated at about 27*s.* per ton. The report of Mr. L. de la Souchère is an elaborate one, but is most amusingly translated by an English notary most imperfectly acquainted with the mining technicalities used. A few extracts will be worth reprinting for their comicality. After stating that the mines were worked many centuries ago and the ores smelted at Milan, the translator continues:—"Some documents prove that 80 furnaces for zinc existed in that town. The old works, which were very irregular, and composed of labyrinths, go-downs, falls, ramparts, &c., have been cleared by the present owner, and have supplied him with a large quantity of ores left by the ancients, who probably preferred a special quality of a more easy fusion. The excavation of those works extended over considerable spaces, and have cost very much by reason of the difficulty of the carriage inland. That labour has been of much use in enabling one to discover a great number of layers of ores of a strength varying from 0.20 to 1*m* 50 and even more. They are perceptibly of a F.O. aspect, and incline towards the south—that is to say, towards the Rizio. Their declivity is more rapid than the hill. Those layers are traversed by an almost vertical lode of blende and semi-blende, in some places mixed with calamine, to which is added a thin lode of lead slightly auriferous. The until now very restricted works, owing to the want of sufficient capital to develop the same, have produced merely about 100 tons per month, which is sold on the spot, not without some difficulty, from 30 to 40 fr. per ton, according to the market price of zinc. This price would be more remunerative if the owner could calcine those ores, which would increase their substance and lessen the cost of carriage. Those ores are divided into carbonates, silicates, and hydrates of a very easy treatment. Several analyses on samples taken by me have pro-

duced an average of 45 per cent. of zinc. Ten tons sent as a sample to the Société du Zinc Français have produced after calcination 60 per cent. This ore has been acknowledged as being of an excellent quality."

The company have without doubt a good field for operations, and it is mentioned that the directors propose that the shareholders shall enjoy three profits, that from working the company's calamine mines, that from producing copper and spelter ingots direct from the ore, and that from converting the ingots into malleable copper and zinc by rolling. The board of directors includes the names of men of sound business experience—such as Sir Joseph M'Kenna, M.P., Sir Walter Blount, and Mr. Rennie—so that no fear need be entertained that the company's operations will be carried on with energy and judgment, and to the satisfaction of all concerned.

#### MINES AND MINING IN THE UNITED STATES OF COLOMBIA.

Public attention having been drawn in many ways during the last year or so to mines and mining in Colombia, it is interesting to know something about what has been recently published there respecting the mineral resources of the country. Amongst the most important notices is a work by Señor Vicente Restrepo, entitled "Estudio sobre las minas de oro y de Plata de Colombia," which has been published by the Government (Bogotá, 1884), and forms the March number of "Andes de la Instrucción Pública" for 1884. As may be imagined the book cannot by any classification come under the head of light literature, yet the dry facts therein set forth are both surprising and of a deeply engrossing nature; for—wherever else in the world gold and silver are supposed to exist—there is not a shadow of doubt that they have been extracted in immense quantities from the soil of Colombia, both since the Spanish Conquest and for ages before. Yet notwithstanding this enormous yield of treasure there is no present indication that the supply of precious metals will cease.

It would be difficult to say which of the nine States comprised in the Republic is the richest; but Antioquia, the Cauca, Tolima, and Panama take the foremost rank. Our author would award the palm to Antioquia, where, according to him, "the ground is most mountainous and very rich in gold. Countless veins of the precious metal cross the mountains, and the beds of the rivers form an uninterrupted series of alluvial deposits. . . . But the regions watered by the rivers Porcés and Neché (whose sands are truly grains of gold) and by their tributaries, are incontestably the richest of all."

Soldiers of the Conquest, governors of the state, travelling priests, historians, and oral traditions, all agree in reporting the mountain of Baritica to be fabulously rich. "Santa Rosa . . . is built upon a hill of alluvial deposit of the finest gold. In the streets of Remedios broad veins of quartz-bearing gold crop out. Zaragosa, Zea, Cruces, Amori, Campamento, Yarumal, Angostura, and Amalfi, are surrounded by the richest tracts of mineal wealth. . . . From this opulent region more than half the gold produced by the State is extracted." It would be wearisome to follow all the various and minute particulars which are given of the mines in this State. Suffice it to say, that almost in every spot where gold has been searched for the result has been satisfactory, and Antioquia has yielded, as its quota to the wealth of the world, \$252,000,000 since the middle of the 16th century. Although there is only one silver mine actually at work in this State—that of Zancudo—Antioqueño gold contains silver in large quantities, but the proportions vary to a greater extent than in any other country.

There are four different classes of alluvial deposit in Antioquia:—1. Those in the banks of existing rivers.—2. The beds of old water-courses.—3. Mines on the sides of hills which have been left through the gradual deepening of the river-bed.—4. Those at an elevation above the rivers. These latter have been caused by an upheaval of the earth after the geological formation was completed."

The next State of which we have an account is the large and flourishing tract called the Cauca. Gold and silver mines in so fertile a country seem almost superfluous, but though they are not so well known as the Antioqueño Mines, and have been abandoned in most cases during the last half of this century, history proves that in ancient times much gold has been produced from the hills, valleys, and rivers of the Cauca, and that the regions of Chocó, Barbacoas, and Supia, are certainly extremely rich in mineral wealth.

"In 1772 . . . 4756 slaves were working in the gold mines of the province of Popayan . . . The approximate annual yield from the Chocó mines at the beginning of the last century was \$1,000,000, and that of Barbacoas, then the centre of the Cauca, between Cali and Almacoz, \$400,000."

The opinions with regard to the Chocó of foreigners who have travelled in Colombia have been carefully collected, and occupy a chapter apart, which treats specially of the Chocó mines. Some of these foreigners (amongst whom are the late Baron Humboldt and Colonel Codazzi, chief of the Geographical Commission to New Granada, drew attention, both on account of their high attainments in science, and also because their motives were thoroughly disinterested. The same cannot, unfortunately, be said of all the writers, native and otherwise, who are quoted in this work, as many have used the opportunity given to them in an official publication merely to puff up districts and mines in which they were personally concerned, whilst depreciating other places with which they are not connected; therefore, little reliance can be put upon the remarks of such persons.

The State of Tolima lies between the Central and Eastern Cordilleras of the Andes and the River Magdalena. All this district is remarkably rich in gold deposits, in gold-bearing quartz, and in rivers which wash down auriferous sands. The names of Mariquita, Ibagué, and La Plata are well known far beyond the limits of Colombia as designating localities justly celebrated for their silver mines. Nearly all these mines are now abandoned, but their past opulence is a matter of history, and their future prosperity a question of time and industry, for there are no signs that the mineral is exhausted. The Santa Ana Mine, the Tolima Mining Company's mines, Malpaso, Orita, and others, are mentioned of course, but no further particulars are given beyond those with which our readers are no doubt already acquainted.

The next State considered is Panama, from whence came the first gold ever brought from the country. Great quantities have since then been extracted from the Isthmus, and recent English, German, French, and American explorers unite in testifying to the incalculable wealth locked up in the mountains, and intermingled with the historic sands of Darien.

There are early notices of rich mines, both gold and silver, in the State of Bolívar, but they have not been prosecuted very successfully. In Cundinamarca only one gold mine worthy of the name has ever been discovered, and it lasted but a short time. The mineral wealth of the State lies principally in salt, iron, and copper. Bogacá is said to produce scarcely any of the precious metals, but has emerald, iron, and copper mines. In Santander is the famous Paramorico, from whence, in one day, a single Indian got \$1000 worth of gold. Many other celebrated mines have been worked in the same State, and history is full of records of what has been produced from them, though nothing has been done there lately. Magdalena is, in all probability, the poorest of the Colombian States with regard to minerals, although there are indications of gold in most of her rivers.

It must naturally occur to anyone who looks back to the records of the past riches of Colombia, that an explanation—if not an apology—is needed for its present comparative poverty, and the abandonment of such a large number of world-renowned mines. All this is gone into at some length in the pages before us, and the various reasons given for stopping the mines may be summed up shortly—1. Wars—first with the aborigines, then with the Spaniards, finally with each other.—2. Want of labourers, from the failure of the Indian race, and high price of negroes.—3. Difficulties in carrying on works at great depths.—4. Insufficient means of communication with the coast.—5. Ignorance of proper methods of treating the ore.

A monograph on the Indian guacas (graves) by Dr. Manuel Uribe



—more valuable to the archaeologist than to the miner—is reproduced in the volume. Extracts from letters of the Viceroy, and reports to them about the mines, conclude a work which, on the whole, is a welcome addition to our knowledge of gold and silver mining. There are, however, some inaccuracies and occasional misstatements, but these are not always easy to avoid, as particulars of mines must frequently be got from persons whose interests makes it impossible for them to be impartial, but we may be thankful to find historical notices, which would take endless trouble to search out separately, collected and printed for the first time, so far as we are aware, in one volume.

They are not well arranged certainly, and the author seems to have found his materials rather unmanageable, for he constantly recurs to a subject in a desultory way instead of putting all his information on that particular subject under one heading. Neither is there an index, which in omission it is hard to forgive the compiler of a book of reference. But these are faults which, no doubt, will be remedied in the next edition, and meanwhile we must heartily congratulate Senator Restrepo on the diligence with which he has laboured, and on the patriotism he has displayed in spending so much time and thought to serve his country in the truest and wisest way by encouraging peaceful arts and undertakings, where the victories will be not one's fellow-citizens but over Nature herself.

#### MINERAL RESOURCES OF NEW SOUTH WALES—No. I.

The annual report of the Department of Mines, showing the progress of mining in the colony during 1883, for which we are indebted to the Minister for Mines—the Hon. J. P. ABBOTT, M.P.—was laid before both Houses of Parliament, at Sydney, on June 5. The Under Secretary reports that the number of applications to lease Crown land for mining purposes made during 1883 was 794 as against 1166 made during the preceding year. Of the 794 applications 310 were for auriferous land and 484 for mineral land. The number of applications dealt with during 1883 was 1194 as against 896 dealt with during the preceding year, being an increase of 298. This increase is probably due to the change introduced in regard to the survey staff, the work being chiefly done now by staff surveyors employed by the Mining Department, and to the use by them of a new field book, which enables them to forward to the department field notes of their surveys without delay. The plans are prepared in the department immediately upon receipt of the notes, by which means the serious delays in furnishing plans of surveys, which formerly proved such a fruitful source of annoyance, have been avoided. Further efforts are being made to expedite the work of the charting branch, which, when complete, will probably enable the department to deal with applications to lease with such reasonable expedition as will remove the complaints concerning the issue of mining leases. Of the 1194 applications dealt with in 1883 620 were for gold mining leases, comprising an area of 4443 acres, exceeding the area of the applications dealt with in 1882 by 2085 acres; and 574 were for mineral leases, comprising an area of 16,959 acres, exceeding the area of the applications dealt with in 1882 by 214 acres. The aggregate area applied for in 1883 is less by 2298 acres than that applied for in 1882. The decrease is chiefly in gold, coal, copper, and tin. The increase is chiefly in shale, diamonds, silver, and lead. Bismuth and cobalt, which did not appear in the list for 1882, are included in the list for 1883. The area under application for lease at the end of 1883 exceeds the area at the end of 1882 by 145 acres. The aggregate area under lease at the end of 1883 exceeds that at the end of 1882 by 1539 acres, the increase being in the areas held for mining gold, tin, and manganese, while the areas leased for mining coal, antimony, bismuth, copper, slate, and silver have decreased. The number of applications under the 28th section of the Mining Act for permission to mine upon or under reserved lands received during the year 1883 is 395, and the number of such applications dealt with during the year is 518. In the bulk of the cases the authorities in respect of the above areas had not actually issued prior to Dec. 31 last. The aggregate area comprised in the authorities granted in 1883 exceeds that of the previous year by 42,646 acres.

**GEOLOGICAL SURVEY.**—During the year the geological surveyor in charge, Mr. C. S. Wilkinson, F.G.S., F.L.S., has devoted much attention to the replacing of the valuable collection of minerals, fossils, and geological works destroyed in the Garden Palace; and I am happy to say his labours have been attended with considerable success, though, unfortunately, no suitable building has yet been secured in which the collection can be exhibited. The want of a suitable building for a museum occasions much needless labour to the geological staff, inasmuch as the specimens of minerals and fossils, on receipt have to be packed and stowed away instead of being arranged in cases for display. The collections of the Mining and Geological Museum have considerably increased, 6659 specimens having been registered during the year, making the total number received since the fire at the Garden Palace, 9371. These include a very complete suite of tin ores and associated rocks, collected by Mr. Wilkinson and his assistant, Mr. David, during their examination of the New England tin fields. From the Inspector of Mines (Mr. Snee), and other offices of the department, as well as from private contributors, many specimens have been received. During the year a large collection, illustrating the mineral resources and the geological features of this colony, was prepared in the department by Mr. Carne, the curator, under the direction of Mr. Wilkinson, and was forwarded to the Calcutta Exhibition. A geological map, with sections of part of the Forest gold field, from the survey of and prepared by Mr. H. Y. L. Brown, has been recently issued by the geological surveyor in charge. The printing has been admirably executed in the lithographic branch of the Surveyor-General's department. This map is of special value in showing the unprospected areas of basaltic country beneath which auriferous beds are likely to be found.

During the year the geological surveyor in charge, in company with Mr. Geological Surveyor David, B.A., F.G.S., has made an examination of the New England tin fields, of the antimony lodes at Hillgrove, near Armidale, and of the bismuth lodes at Kingsgate and Hogue's Creek, near Glen Innes. Mr. Wilkinson, also in company with the Inspector of Mines, examined the reef in the Great Victoria Amalgamated Gold Mining Company's mine at Adelong, and supervised the breaking down and testing of 3 tons of quartz from a depth of 1030 ft. in connection with the claim of the company to the reward of 500*l.* for the discovery of payable gold in quartz below the depth of 1000 ft. This duty was performed by Messrs. Wilkinson and Snee with the greatest care, and resulted in the claim to the reward being recognised by the department. At the instance of Messrs. Augustus Morris and George Rankin, who were deputed by the Government to report upon the state of the public lands, Mr. C. S. Wilkinson, geological surveyor in charge, furnished a report upon the prospects of obtaining fresh water below the surface in the districts between the Lachlan and Darling rivers, and beyond the Darling. This has already been published. Five geological formations have been described in which underground water may be found, and it is pointed out that artesian water will probably be obtained within the cretaceous area, which comprises about 32,000 square miles, and which is naturally devoid of permanent surface water; but within the area occupied by the palaeozoic formations, which with few exceptions are of an impermeable nature, the supply must chiefly depend upon the rainfall conserved in tanks and dams.

During the year Mr. Geological Surveyor Pittman made inspections in the Muttama, Mount McDonald, Carcoar, Cowra, and Mount Victoria districts. He also examined and reported upon Broughton Island and the Yalwal gold field, but a part of his time during the year has been devoted to the duties as Chief Mining Surveyor. Mr. Geological Surveyor David, since his examination in company with the geological surveyor in charge, has been engaged upon a detailed survey of the alluvial leads and the lodes of the Vegetable Creek tin mining district. The caves, which are under the supervision of the geological surveyor in charge, have during the year received considerable attention, and are, under his direction, gradually becoming more attractive to visitors, additional improvements having been made during the year, with a view to the preservation of the beautiful natural objects in them, at the same time adding to the convenience of visitors. The number of visitors to the Fish River Caves

during the year was 603. Towards the end of the year steps were taken with a view to the making of improvements at the Wombellan Caves, which it is hoped will soon prove attractive to visitors.

**MINING SURVEYS.**—During the year Mr. E. F. Pittman, one of the geological surveyors, was appointed Chief Mining Surveyor, and under his direction considerable progress has been made in clearing off the arrears of surveys, and he has made such arrangements as it is thought will in future secure the measurement of parcels of land applied for to lease within a reasonable time after the application has been lodged. Of course, the vast extent of territory over which our mineral deposits are distributed, and the isolated position of some of the areas applied for, present difficulties not easily overcome with so small a staff of surveyors as that employed by this department; but the Surveyor General is always most ready to render us every assistance in the way of allowing the surveyors under him to measure parcels of land for mining purposes, if by that means the work can be more speedily performed than by the surveyors on the staff of this department. The Chief Mining Surveyor has also devoted considerable attention to the work of the charting branch of this department, with a view to clear off the arrears of work, and to secure promptitude in dealing with applications to lease, as well as applications under the 28th section, and I feel confident that if supported in his efforts he will soon succeed in removing one of the chief objections to the leasing system—the delay in dealing with the applications to lease. Should my anticipations in this direction be realised it will not only be a source of gratification to the department, but it will tend to encourage mining enterprise. Prior to 1883 I have not been in a position to publish the number of surveys made under the Mining Act in any one year, and the advantage of such publication would not have been of the same importance for purposes of comparison, as now that the greater number of surveys are made by staff surveyors connected with this department, but the number made in 1883 is as nearly as can be ascertained 620. In future I hope, with the aid of the Chief Mining Surveyor, to be able to compare the labours of the surveyors during the year to which my report refers with the work of preceding years. The thanks of the department are due to Mr. C. S. Wilkinson, for having undertaken and ably performed the duties of Chief Mining Surveyor in addition to his own as head of the geological staff prior to the appointment of Mr. Pittman.

**LOCALITY MAPS.**—There are probably about 4000 parishes in this colony of which no maps have yet been published. Many of these parishes are within gold or mineral fields, consequently, even if parish maps could be used for locality maps they would not in those cases be available. This department had already, prior to 1883, compiled and published 20 locality maps in parishes, one locality map embracing seven parishes, six locality maps of principal gold fields, and two sketch maps of gold fields.

**ROADS, STREETS, AND GATES.**—The work performed by the officers of the roads branch during the past year, under the direction of Mr. Herring, the chief clerk of the department (Mr. R. H. Ormiston being the head of the branch), has been highly satisfactory. Mr. Ormiston and the staff under him not only deal with the proclamation of new roads, the alignment of new streets, and the granting of public gates, but also the preparations of parliamentary returns and the supervision of the advertising.

**DIAMOND DRILLS AND WATER AUGERS.**—During the year the diamond drills have been fully employed, chiefly in boring for coal and water. The work done has on the whole been satisfactory, notwithstanding that in consequence of the serious illness of the superintendent, during the latter part of the year, the department was deprived of his valuable services. The want of the vigilant supervision which the superintendent exercises over the work has been felt in the extra cost of some of the bores put down during his absence, and the extra cost of these bores has detracted somewhat from the year's results. Nevertheless, as will be seen by reference to the superintendent's report, we have proved coal in five different bores—At Dora Creek, near Cooranbong, 6 ft. 3 in.; at L. T. Creek, Lake Macquarie, in the aggregate, 23 ft. 3 in.; at Teralba, Lake Macquarie, in the aggregate, 40 ft. 11 in.; at Stanwall Park, near Bulli (two bores), in one the seams measured, in the aggregate, 31 ft. 2 in., and in the other 8 ft. 3 in., making a total of 109 ft. 9 in. of coal bored through, and the core saved is equal to 78.71 per centum of the coal pierced. At Wyong Creek, about 12 miles south of Gosford, a coal seam of 3 ft. 3 in. in thickness was discovered at the end of the year 1882. The total depth bored during the year is 6643 ft. 7 in., and the average cost per foot to the public was 13s. 7 d., the size of the bores being 2 in., 2 in., 3 in., 3 in., and 4 in. in diameter. Three bores in search of water were completed during the year, water being found in each; the fourth bore was in progress at the end of the year. While boring for coal on the west side of Lake Macquarie a supply of fresh water was tapped at a depth of 197 ft., which rises to a height of some 30 ft. above the surface, which is 20 ft. above the lake level. The point at which the water was tapped is therefore considerably below sea-level. One bore in search of a deep alluvial deposit of tin was not successful. This is specially to be regretted, as in the district where the drill was employed there is a very large extent of country containing deep deposits of stream tin requiring to be prospected, in which a drill should be of great service. The want of success in this particular case was probably due to the absence from duty of the superintendent. During the year attempts were frequently made to induce the miners on some of our gold fields to employ the drills in country suitable to them, but the want of co-operation prevented the drills being so employed. There is, however, reason to believe that one or more will be employed during 1884 in search of deep alluvial leads. In the absence of a demand for the use of the drills elsewhere they have been well employed in proving our coal seam.

With coal measures occupying 23,950 square miles, and with such deposits of coal as we possess in this colony, and with an output exceeding 2,500,000 tons per annum and rapidly increasing, it is difficult to conceive how, under all the circumstances, the drills could have been much better employed than they were during the past. In addition to the good work done by the drills, the sections of the bores and the cores obtained therefrom not only furnish useful information to the public, but are of very great value to the Geological Branch of the department. Indeed if the cores obtained had to be paid for at the same rate as the core obtained from the bore on the Sutherland Estate, near Port Hacking, which was purchased by the department for the sum of 550*l.* in 1880, the cores obtained by means of the Government drills would represent a considerable money value. At the commencement of the year the department had five water-augers. Three of these had been forwarded to Bourke for the purpose of boring for water on the line of road from Bourke to Tibooburra, one had been forwarded to Giralambone and one to Granton, but no work of any moment had up to that time been done. During the year four additional augers have been purchased, and the following work has been done:—On the Bourke line the first bore was sunk, 18 miles from Bourke, 194 ft. 4 in., in which salt water was found at various depths; the second bore was sunk near the first 198 ft. 3 in., and with similar results; the third bore, 34 ft. 6 in., in which a small supply of fresh water was found in a drift; the fourth bore was sunk, 51 miles from Bourke, 89 ft. 2 in. in which a small supply of fresh water was struck at depths of 30, 61, and 70 ft. respectively; the fifth bore was sunk near the fourth 103 ft., wherein a supply of good fresh water was obtained 80 ft., running at a height of 8 ft. over the surface, at the rate of 60 gallons per hour; the sixth bore was sunk near the fifth 198 ft. 3 in. At a depth of 122 ft. 6 in. in this bore a supply of good fresh water was obtained equal to 600 gallons per hour. This bore was in progress at the end of the year, but early in 1884 boring was discontinued at a depth of 200 ft. 8 in. From this bore 600 gallons per hour of good fresh water is running from the pipes, and spouting at a height of 10 ft. above the surface. Total cost of these bores is 1807*l.*, including 604*l.* for carriage of plant from Sydney to the scene of operations. Very great difficulties have been experienced on this line, owing to want of feed and water for the horses, and the trouble occasioned by the wild horses, added to which much time is necessarily lost in sending to Bourke for supplies, repairs, &c., in consequence of which it was found impossible to carry on more than one bore at a time, and the cost of boring was necessarily very much increased. At Giralambone

much time was lost in searching for a suitable site for boring. The first bore was sunk 155 ft. 6 in., at which depth salt water fit for stock was found; the second bore, 126 ft., salt water struck at 116 ft.; the third bore, 100 ft. 3 in.; the fourth bore, 112 ft. 6 in. In the third and fourth bores no water was met with. The total cost, 426*l.* 9s. 4d., including carriage of plant from Sydney to site of operations, 105*l.* 14s. 7d.

After the auger first sent to Grafton had been some time at work it was found necessary to send a second. Great difficulties were experienced in boring at this place on account of the drifts, &c., met with, and the consequence was very slow progress. Two bores, sunk to depths of 46 ft. 3 in. and 46 ft. 6 in. respectively, had to be abandoned without any results; the third bore was carried down to a depth of 171, and was still in progress at the end of the year. The work at this place was considerably delayed in consequence of there being no tubes in the colonies sufficiently strong to support the bore, and artesian tubes had to be imported from Scotland. The total cost of the work at Grafton to the end of the year was 415*l.* 18s. 10d., including cost of carriage. In the month of February boring was commenced at Gunnedah for the purpose of supplying the town with water. The following trial bores were sunk:—The first, 53 ft.; the second, 25 ft.; the third, 23 ft.; the fourth, 40 ft. 11 in.; the fifth, 59 ft. 9 in.; the sixth, 40 ft. 6 in.; the seventh, 30 ft.; the eighth, 48 ft.; and the ninth, 33 ft. 6 in.; in each of which fresh water was found but not in sufficient quantity, but from the results obtained the superintendent was enabled to select a site at which a bore was sunk to a depth of 132 ft., from which a supply of fresh water is obtained for the use of the town. Total cost 241*l.*, including carriage of plant 33*l.*

In the month of November last an auger was sent to Dungrell's Sandridge Reserve, on the road from Collarindibri to the Narran, known as the Sixty-mile Track, the object being to find a supply of water for travellers and stock on that line of road. At the end of the year the bore had reached a depth of 100 ft. 3 in., still in progress. Total cost, 372*l.*, including 300*l.* cost of removing plant from Giralambone. On Nov. 14 last an auger was sent to Gorian Station, near Narrabri, to bore for water under the published conditions. Up to the end of the year 83 feet had been bored, and the work was still proceeding. In addition to the work done as above, said in boring for water, an auger was sent on Oct. 8 last to Araluen, to test the alluvial deposits in Messrs. Johnston and McGregor's mine. Bores were sunk to depths of 24 ft., 24 ft. 6 in., 30 ft. 6 in., 7 ft., 41 ft. 3 in., and 41 ft. 5 in. respectively. The auger was employed under the published conditions. Sections of the bores sunk in search of water are carefully prepared, and the sites are planted upon a map of the colony, with particulars of the results obtained, and as this information accumulates it will be immensely valuable for both scientific and practical purposes, not only in guiding the department in the further search for water, but in aiding private enterprise in the same pursuit.

#### WORKMEN AND THEIR EMPLOYERS—No. II.

The whole question of strikes and lock-outs has been ably and concisely treated by a well-known American mining engineer—Mr. Joseph D. Weeks—and his observations will be well worth study. Strikes and lock-outs, he says, are suspensions of work growing out of differences between employers and employed. Though it is customary to speak of all such interruptions of labour as strikes, some are more properly termed lock-outs, there being an essential difference between a strike and a lock-out. A strike is a suspension of work resulting from a dispute originating in some demand of the employed—a lock-out, in some demand of the employer. A stoppage of work, for example, resulting from a demand on the part of the employees at a works for an advance in wages, would be a strike—a stoppage resulting from a demand by the employer for a reduction would be a lock-out. An apparent exception to this definition is those strikes and lock-outs entered upon for the purpose of influencing the settlement of other strikes and lock-outs, as when workmen, who are satisfied with their own wages, cease work to assist in enforcing the demands of other workmen who are not satisfied, or when employers lock out their employees with whom they have no differences, depriving them of work and its wages for the purpose of preventing them from assisting striking workmen. In these and similar apparent exceptions, however, there is always a formal or implied demand. It is frequently difficult to determine whether a labour contest should be classified as a strike or a lock-out. Practically the distinction is of little importance, except as it bears on the question of the relative tendency of employer and employed to take the initiative in these industrial conflicts. Unless, therefore, it is expressly stated to the contrary, the word strike in this article will include both strikes and lock-outs.

With regard to the classification of strikes, Mr. Weeks adopts substantially that of Sir Rupert Kettle, given in his *Strikes and Arbitrations* some 20 years ago. Strikes and lock-outs, he says, may be divided into three general classes. They are occasioned by—1, differences as to future contracts; 2, disagreements as to existing contracts; or, 3, quarrels on some matter of sentiment. These contracts may be agreements more or less formal, or customs of the trade and methods of work and administration, which from long usage have the force of agreements. The first class named would include strikes arising from differences as to the present and future wages of labour; from attempts to change existing agreements, customs, or methods, or to introduce new ones. Disagreements under the second class would arise either upon matters of fact or construction, while quarrels of the third class grow out of the offended *amour propre*, either of the individual or the class. In the early history of labour troubles the causes of strikes are few. They arose chiefly from differences as to rates of wages, which are still the most fruitful sources of strikes, and from quarrels growing out of the dominant and serviant relations of employers and employed. While labour remained in a state of actual or virtual servitude there was no place for strikes. With its growing freedom "conspiracies of workmen" were formed, and strikes followed. The scarcity of labour in the 14th century, resulting from the Black Death, and the subsequent attempts to force men to work at wages and under conditions fixed by statute, were sources of constant difficulties, while the efforts to continue the old relation of master and servant with its assumed rights and duties, a relation that English law recognises to this day, were, and still are, the causes of some of the most bitter strikes that have ever occurred.

With the rise of the craft-guilds, the opportunities for strikes were increased, and the list of causes enlarged. These craft-guild strikes rarely grew out of differences as to wages, but from disputes regarding presumed infringements of privileges, or innovations of trade customs, and were sometimes undertaken for the most trivial causes. The custom of blacklisting, or reviling, as it was termed, practised by these guilds as a method of punishment, was also the constant source of strikes, the craftsmen refusing to work for the "reviled" master or with the "reviled" journeyman until he had made atonement and been recognised as honourable by the guild. In many respects strikes growing out of modern Trades Unionism resemble those of the craft-guilds, which organisations are the precursors if not the parents of modern Unionism. In addition to the causes named, many of which are still as potent as ever, the changes in the relations of employer and employed, and of workmen to each other and to their occupations, arising from the modern organisation of labour and industry, have introduced new sources of discontent, and consequently increased the list of causes from which strikes may arise. The possible causes of strikes at the present time, therefore, are much more numerous than they were formerly, and the liability to trouble greatly increased. While this is true, a careful analysis of the various causes shows that they can all be grouped under a few general heads. Strikes are caused by differences as to—1. Rates of wages, demands for advances or reductions, chiefly. 2. Payment of wages, changes in the method, time, or frequency of payment. 3. Hours of labour. 4. Administration and methods of work, for or against changes in the methods of work or rules and methods of administration, including the difficulties regarding labour-saving machinery, piece-work, apprentices, and discharging employees. 5. Unionism. 6. Miscellaneous, including



strikes from matters of sentiment and a few others that admit of no classification.

In connection with the question of the cause of strikes, one naturally expects to find that they result most frequently from differences regarding rates of wages; but it is somewhat surprising that the next serious matters of dispute are administration and methods of work, not such is the case. In an investigation into the strikes of 1880, made by Mr. Weeks for the United States Census, a classification of strikes according to causes showed the proportion per 1000 to be:— Rates of wages, 716; administration and methods of work, 132; payment of wages, 43; Trades Unionism, 27; hours of labour, 8; miscellaneous, 11; and cause not given, 63=1000. This exact proportion will not hold good for all years; but it is safe to assert that strikes growing out of disputes regarding rates of wages will always be more than 50 per cent. of the whole number of strikes. The proportion of strikes arising from demands for advances or demands for reduction—the two chief causes of difficulties connected with rates of wages—will vary greatly in different years, depending chiefly upon the condition of business, demands for advances being more frequent in years of high prices, and for reductions in years of low prices. Of the strikes arising from differences as to rates of wages, which were reported upon in the above table, 86 per cent. were for advances, and 14 per cent. against reductions.

With regard to the conditions influencing the frequency of strikes, Mr. Weeks remarks that the information at disposal is too meagre, and what is available too fragmentary and inexact to justify the formulating of any universal laws as to their frequency, or any unconditional proposition as to their justice or policy. There are, however, certain facts which a study of strikes and lock-outs seems to make evident. Considering, first, the conditions that influence their frequency. As has already been indicated, the modern organisation of industry and labour has largely increased the possibility of strikes. Prof. Cliffe Leslie defines strikes to be "refusals of a number of workmen in combination to work on the terms offered by the employer." At Mr. Weeks remarks that it does not seem to him that a "number of workmen in combination" are essential to a strike, and all strikes, using the word as Prof. Leslie does, to indicate strikes and lock-outs, are certainly not refusals of workmen to work on the terms offered by the employers. But while Mr. Weeks cannot accept Prof. Leslie's definition, he admits that there can be no doubt that the opportunities offered for combination by the aggregation of large bodies of workmen of the same trade in the same locality, and by the ease of communication between those of the same class employed in different localities, have greatly increased the number of strikes, and made those that have occurred of much greater importance. It will, therefore, be found, as a rule, that in those trades in which large numbers of men are engaged in the same occupation, and in localities where large bodies of workmen congregate, strikes are comparatively frequent. There are but few strikes in the agricultural occupations, and many in the mining, mechanical, and manufacturing industries.

# THE TIN TRADE.

Messrs. DE MONCHY and HAVELAAR (Rotterdam, July 31).—The tin market has been quiet during the greater part of this month, and prices, though tending in buyers' favour, have not changed much since the opening. The demand has been regular, more especially for spot parcels, forward delivery being only in limited request. Rather large parcels falling due were ordered over to later delivery, operators feeling little inclination to part with their interest. In the face of favourable statistics, together with moderate prices, the Dutch Trading Company's fourth sale in 1884 took place to-day, when 122,345 Banca were sold from 50½ to 51½ fl., average 51½ fl. Next sale will be held towards the end of September. In Banca, transactions were confined to very narrow compass, the high price, compared with Billiton, greatly interfering with business. From 52 fl., we advanced to 52½ fl. and fell back to 51½ fl., the decline bringing out more buyers. We now close 51½ fl. Billiton was largely sold in during the latter part of the month. From 50 fl. prices declined to 49½ fl., but since recovered to 49½ fl., which is our present quotation. A public sale of about 10,000 peculs will be held at Batavia on Friday, Aug. 29. The position of Banca tin in Holland on July 30, according to the Official returns of the Dutch Trading Company, was—

	1884.	1883.	1882.
Import in July	3,319	7,820	30,075
Total seven months	53,649	99,367	103,815
Deliveries in July	6,500	12,400	7,280
Total seven months	67,207	74,286	75,893
Stock second hand	45,301	44,163	41,154
Enslaved Stock	61,149	88,382	72,933
Total stock	108,450	130,545	114,387
Amount	9,000	5,000	5,000

Statement of Billiton.

	1884.	1883.	1882.
Import in July	9,600	12,700	14,450
Total seven months	47,933	73,390	81,751
Deliveries in July	6,768	4,428	6,701
Total seven months	59,600	51,594	53,790
Stock	44,861	74,113	52,047
Afloat	15,000	14,000	11,000
Quotation, July 31—Banca	51½ fl.	57½ fl.	64½ fl.
Billiton	49½ fl.	56½ fl.	64½ fl.

These combined returns of Banca and Billiton for 1884, compared with those of 1883, exhibit—A decrease of the import for July of 238 tons; a decrease of the import for the seven months of 224 tons; a decrease of the deliveries for July of 111 tons; an increase of the deliveries for the seven months of 29 tons; a decrease of the stock second-hand of 879 tons; a decrease of the unsold stock 710 tons; a decrease of the total stock of 1667 tons; a decline of the quotation Banca of 10½ per ton.

The Government Returns for the month of May are as follows:—

	1884.	1883.	1882.
To Germany	282	272	369
England	650	2	20
Belgium	65	80	94
France	49	35	69
Hamburg	49	35	69
The United States	5	—	—
Other countries	68	32	30
Total	1137	435	621

EXPORT OF TIN FROM HOLLAND.

	1884.	1883.	1882.
To Germany	282	272	369
England	650	2	20
Belgium	65	80	94
France	49	35	69
Hamburg	49	35	69
The United States	5	—	—
Other countries	68	32	30
Total	1137	435	621

Messrs. STRAUSS and Co. (London, July 31) issue the following

	June 31.	July 31.	July 31.
Straits and Australian, spot	5,703	5,472	4,533
Straits, afloat	260	468	418
Australian afloat	1,117	1,247	1,150
Banca, on warrants	924	1,416	1,380
Billiton, spot	1,313	1,402	2,316
Billiton, afloat	1,309	1,015	853
Australian tin in Holland	—	—	—
Stocks in America, including quantity afloat	1,280	1,990	4,480
Total	13,506	13,783	15,828
Prices of Straits and Australian	£22 15	£23 0	£24 10
Deliveries during month in London	1,550	1,162	1,546
" " " " Holland	482	398	459
Total	2,032	1,560	2,005

Shipments during the month from Straits to London 725 tons; from Australia 850 tons; from London and Holland to America 953 tons; from Straits to America 850 tons; from Australia to America, — tons. Banca in Trading Company's hands and afloat, 2473 tons.

# THE COPPER TRADE.

Messrs. HARRINGTON, HORAN, and Co. (Liverpool, July 31).—Copper charters for second half of July were advised on July 16 as 3200 tons, of which 1100 tons bars and ingots, with 1200 tons furnace material for England, and 900 tons bars for the Continent. The price of bars was subsequently raised to £16 7s. and Exchange 3½d. During the early part of the fortnight the market was rather quiet, but during the past few days has been animated, and in consequence of the small quantity of metal offering prices advanced over 25s. per ton, business having been done at from 53½ to 54½, spot, and 53½ to 55½, forward. We close firm at the higher rates. During the same period a good business has been done in furnace material, the price of the same being at Liverpool: 12 tons Peruvian ore (carbonate) spot, and 850 tons Chili regulus to arrive here per Delta, at 10s. 6d.; 250 tons yellow Quebrada regulus, and 170 tons Italian ore to arrive, at 9s. 6d. per unit.—At 9s. 6d. per unit, 282 tons Italian ore (low produce) to arrive at 9s. 6d. per unit.—At 9s. 6d. per unit, 800 tons Chili regulus ex Jungfrau, 625 tons ex Pacific, and 704 tons ex Delta, at 10s. 6d.; 650 tons Quebrada regulus, 790 tons ruby Quebrada regulus, and 120 tons Spanish ore at 10s., and 2100 tons Libiola ore at 9s. 9d. per unit. Precipitate: 100 tons Mason's Spanish at 10s. 6d., and 851 tons at 10s. 3d.; 100 tons Tinto precipitate (No. 2) at 10s. 9d., and 35 tons best at 11s. 6d.; 100 tons Tinto precipitate, at 10s. 10d., and at Swansea 630 tons Spanish (Quebrada regulus) at 10s. 6d. per unit. Import of Chili copper during the past fortnight, 2257 tons fine, against 350 tons fine same time last year; delivery of Chili copper during the past fortnight, 727 tons fine, against 1490 tons fine same time last year; delivery of other copper during the past fortnight, 2405 tons fine, against 1150 tons fine same time last year. The imports of Chili and other copper into Liverpool and Swansea since Jan. 1, 1884, 12,050 tons; deliveries during the same period, 47,071 tons fine; for the same time last year the figures were 35,794 and 32,079 tons respectively.

Arrivals here during the fortnight of West Coast S.A. produce—Galiovidian, from Valparaiso, 94 tons bars; Tropique, 156 tons regulus, 100 tons bars, 110 tons ingots; Polestar, 80 tons bars; Ehen, 150 tons bars; Cordillera, 643 tons bars, 184 tons ingots; Annie Fletcher, 97 tons regulus.—At Swansea: Edgar, from Carrisal, 704 tons regulus; Lotia, from Troopilla, 176 tons bars, 611 tons regulus; Pacific, from Chanaral, 629 tons regulus.

Stocks of copper (Chilian and Bolivian) in first and second hands, likely to be available, we estimate at—

	Ores.	Regulus.	Bars.	Ingots.	Barilla.
Liverpool	323	156	18,779	310	—
Swansea	323	2,242	4,155	—	—
Total	646	2,398	22,934	310	—

Representing about 24,388 tons fine copper, against 24,219 tons June 15, against 26,245 tons July 31, 1883; 23,793 tons July 31, 1882; 31,672 tons July 29, 1881. Stock of copper contained in other foreign ore and Spanish precipitate, 4212 tons fine, against 4014 tons July 31, 1883. Stock of Chili bars and ingots in Havre, 1435 tons fine, against 2149 tons July 31, 1883. Stock of Ooro Ooro Barilla in Havre, nil, against nil, July 31, 1883. Stock of copper other than Chili in Havre, 285 tons fine, against 520 tons July 31, 1883. Stock of Chili copper afloat and chartered for to date, 8011 tons fine, against 13,239 tons July 31, 1883. Stock of foreign copper in London, chiefly Australian, 3512 tons fine against 4600 tons July 31, 1883.

# BIRDSEYE CREEK GOLD MINING COMPANY.

The directors' report prepared for presentation at the meeting on Aug. 12 states that during the past year 5941 ozs. of gold have been obtained, realising 23,509½, at a cost of 15,417½, 9s. 11d., leaving a profit of 8091½, 19s. 1d.; of this profit 4116½, 3s. 10d., has been expended on the completion of the Uncle Sam works, leaving a net balance of 3975½, 15s. 3d. This outlay of 4116½, 3s. 10d. on the Uncle Sam claim represents dividends amounting to 5s. per share. A dividend of 1s. per share was paid in December last, and another of 2s. has been paid since the closing of the accounts. In the present position of hydraulic mining in California the proprietors will share with the directors the satisfaction they express that the profits have been devoted to the development of a "drift" claim, a system of working which is not it is believed likely to be interfered with.

The proprietors were informed by circular on Feb. 28 of the position of the debris question: "That in the test case of Edward Woodruff v. North Bloomfield Gravel Mining Company, et al., lately argued before the United States District Court of California, a perpetual injunction has been granted against the defendants. This virtually puts a stop to all hydraulic mining in California." In order to avoid threatened litigation, and acting under the advice of the company's legal advisers in California, Mr. Goodwin stopped hydraulic washing on June 25, pending an appeal to the Supreme Court of the United States, which it is believed will be made.

The directors congratulate the proprietors and themselves that by the adoption of this plan of working they have been relieved from a contingency which must have been inevitable had the company been solely dependent on hydraulic work; as it is Mr. Goodwin appears to anticipate profitable results for the future.

WEST KITTY—TREVAUNANCE UNITED—NEW KITTY.—The meetings of these three companies, which were held at St. Agnes, on Tuesday, were largely attended by Cornish and other shareholders, and everything passed off in the most satisfactory manner. As to West Kitty comment is scarcely necessary, inasmuch as the dividend of 12s. per share is about the best evidence the adventurers can have of the value of that particular property. A notable feature in connection with this mine is the rich quality of tin, whilst the selling price per ton is over 50l. At Trevaunance the tin, and the cheap rate at which it is produced—about 24l. per indications are of no ordinary character. The discovery of the copper lode, which has been worth from 15l. to 20l. per fathom for the whole length of 15 fathoms driven, gives very considerable value to the property, but it becomes of very much more importance when it is borne in mind that this copper is in all probability the forerunner of a great course of tin in depth. The opinion of most practical Cornish gentlemen present seems to be that they are going to have another West Kitty, in Trevaunance. Anyhow, the prospects were considered sufficiently decided to warrant the purchase of an engine, for the purpose of paying for which a small call was made. In New Kitty the prospects seem extremely good, and the adventurers confidently hope they may meet with results similar to those obtained in West Kitty, without a very large expenditure of labour, and in a very much shorter period than they were obtained there. The able and carefully-thought-out statement of Mr. Couzens (which will be found in the report of the New Kitty meeting) was listened to with the closest attention and interest by the adventurers, who certainly have never before had the position and prospects of this mine so clearly and ably placed before them. At all three meetings particular satisfaction was expressed with the straightforward and business-like way in which the financial business is carried out. The debits and credits are brought up to the same date, and no liabilities are allowed to remain unpaid; and the opinion may be expressed that if this same "No Credit" system were adopted by all other Cornish mines not only would it be beneficial to the adventurers themselves, but it would also have the effect of attracting into the county large amounts of capital for employment in mining enterprise.

CHARLES MANBY, F.R.S.—It is with regret that we announce the death on Thursday evening, in his 81st year of Mr. Charles Manby, F.R.S., the much respected honorary secretary of the Institution of Civil Engineers. He was the eldest son of the late Aaron Manby, of the Horsely Ironworks, Staffordshire, and served an apprenticeship to his father. In 1820 he designed and constructed the Aaron Manby, the first iron steam vessel that ever made a sea voyage, and served as chief engineer on board. He superintended the erection of gasworks at Paris, became one of the managers of the ironworks at Charenton, and remodelled the Creusot Ironworks. He then entered the Government service, and was appointed chief engineer of the tobacco manufactories for the French Government. In 1839 he became secretary of the Institute of Civil Engineers, and on resigning that post in 1856 was presented with a purse of 2000 guineas. He had the orders of several foreign nations conferred upon him.

OSCAR GOLD MINE.—Capt. Daw, the managing director in Norway, having again visited this property, has sent home some remarks, which appear in another column, and will be found very interesting. He says—"In washing samples every day, gold is found in nearly every sample. A sample I saw this morning washed from Hansen's lode showed splendid gold. This lode, with many others, when the property was sold to the company, was not known. All the gold that we have broken since you (the Chairman) were here, is from other lodes—not from Oscar shaft. . . . It certainly appears we shall have a great mine here." The erection of the machinery is going on with rapidity, and there is much work done towards the stamps and floors.

GAS SHARES.—The principal business in these shares, according to this evening's report of Messrs. W. L. WEBB and Co., of the Stock Exchange and Finch-lane, has been—Bombay (Limited), 6¼ to 6½; British Gaslight (Limited), 42; Buenos Ayres, New (Limited), 1½ to 1½; Continental Union (Limited), Original, 3½ to 3½; ditto New, 1869 and 1872, 24½; ditto, 7 per cent. Pref. 30½; Gas Light and Coke, A. Ordinary, 219 to 220½; ditto, H. 7 per cent. Maximum, 147½ to 148½; ditto, J. 10 per cent. Preference, 235½; ditto, 4 per cent. Debenture Stock, 108½ to 108; Imperial Continental, 199½ to 201; Mauritius (Limited), 1½; Monte Video (Limited), 16½ to 16½; Rio de Janeiro (Limited), 20½ to 20½; South Metropolitan, A. 265 to 266; ditto, B. 221 to 222. Gas stocks easier. Rio, however, has improved 1½.

INSURANCE SHARES, according to this evening's report of Messrs. W. L. WEBB and Co., of the Stock Exchange and Finch-lane, been dealt in as follows:—City of London Fire (Limited), ¼; Commercial Union, 17½ to 17½; Employers' Liability Assurance Corporation (Limited), 1½; Imperial Fire, 149; Indemnity Marine, 15 to 15½; Liverpool, London, and Globe, 1½; Annuity, 22½ to 24½; Marine (Limited), 26½ to 26½; Ocean Marine (Limited), 5½; Phoenix, 22½ to 22½; Railway Passengers, 7½ to 7½; Royal Exchange, 371 to 375; Standard Fire Office (Limited), ½; Universal Marine (Limited), 6½; London and Provincial Marine (Limited), 4. The old companies maintain their prices, and are firm; new companies very little doing.

TRAMWAYS.—The closing prices of this evening, as quoted by Mr. WM. ANNOT, of Tokenhouse-yard, are given in tabular form in the last page of the Journal.

RAILWAY AND GENERAL MARKETS.—Referring to the course of business done to-day during official hours (11 to 3) Mr. Ferdinand B. Kirk Birch-lane, writes:—"Opening: American railway shares are again much higher, and have firm appearance. When attention was drawn in the Mining Journal to Lake Shore and Central Pacific the latter were 33s. and the other 77s. Lake Shore are now 89s., and Central Pacific 84s. Eries being 17, and Denvers 12½. Atlantic First Mortgage are quoted 39½ to 40, but the Thirds are unchanged at 4½. In home railways Brighton A have advanced 1, Great Eastern ½. Trunk Ordinary, 11 to 11½, Second Preference, 6½ to 6½, Thirds, 28½ to 28½. Mining shares somewhat neglected. Alankons, ¼ to ½; Callao Bis, 3s. 6d. to 3s. 6d.; Brachburg, 1½ to 1½; Colombian Hydraulic, 7s. to 9s.; Ontonies, 4s. to 4s. 6d.; Fontaine, 1½ to 1½; Colorado, 1½ to 1½; East of Wall, 7s. to 9s.; Old Shepherds, 1s. to 1s.; Home Mines Trust, 11s. to 13s.; Organos, 13s. to 14s.; Orita, ½ to 1; Oscar Gold, ¼ to ½; Transvaal, 20s. to 22s.; Victoria Gold, 8s. to 10s.; Wheel Crebor, 1½ to 1½.—Closing: Unified have advanced ½. Brighton A and Dover A, though not at their best, still show a rise on the day, but the marked advance in American railways has brought in sellers, and there is a

general decline. Lake Shore and Atlantic Firsts are 1½ below the highest reached. Trunks have also fallen; the Seconds are 1½ to 60½, Thirds, 28½, Ordinary, 10½ to 11. Mason and Barry, 10½ to 11. Rio Tinto, 15½ to 16, showing no change.

MANCHESTER SHIP CANAL.—A large number of readers of the Mining Journal will regret that the result of the Select Committee of the House of Commons has been unfavourable to the enterprise. After an enquiry extending over 10 days the committee decided yesterday (Friday) afternoon that the preamble of the bill had not been proved. The bill was consequently rejected.

# COPPER ORES.

Sampled July 16, and sold at Tabb's Hotel, Redruth, July 31.					
Mines.	Tons.	Price.	Mines.	Tons.	Price.
Mellanear	83	£27 7 0	Levant	51	£25 5 0
ditto	81	2 3 0	ditto	30	2 19 0
ditto	79	2 3 0	Carn Brea	60	2 16 0
ditto	76	2 3 0	Tincroft	40	2 13 0
ditto	72	1 13 6	Wheal Uny	25	4 10 0
ditto	71	1 9 0	ditto	15	10 4 0
ditto	70	2 3 0	Botallack	10	8 14 6
Levant	65	4 8 0	ditto	1	18 1 6
ditto	64	4 9 0			

TOTAL PRODUCE.

Mellanear	532	£1076 10 0	Tincroft	40	£107 0 0
Levant	210	927 1 0	Wheal Uny	40	266 2 6
Carn Brea	60	169 10 0	Botallack	11	105 15 6

Average standard, £ 80 1 0 | Average produce . . . 7½  
Average price per ton . . . £219 6  
Quantity of ore . . . 893 | Quantity of fine copper, 63 tons 16 cwt.  
Amount of money . . . £ 2651 19 0  
LAST SALE.—Average standard, £ 80 0 0 | Average produce . . . 5½  
Standard of corresponding sale last month, £ 87 0 0 | Produce, 6½

# COMPANIES BY WHOM THE ORES WERE PURCHASED.

Names.	Tons.	Amount.
Vivian and Sons	220	£709 4 6
P. Grenfell and Sons	143½	381 13 0
Newell, Druce, and Co.	137	248 0 0
Williams, Foster, and Co.	230½	755 7 0
Elliott's Metal Company	87	337 12 0
Charles Lambert	65	220 2 6
Total	893	£2651 19 0

# LEAD ORES.

Date.	Mines.	Tons.	Price per ton.	Purchasers.
July 23—Fozdale	100	£ 8 10 0		Panther Lead Co.

# BLENDE.

Date.	Mines.	Tons.	Price per ton.	Purchasers.
July 30—Standard	40	£1 15 9		Villiers Speller Co.

# BLACK TIN.

Date.	Mines.	Tons.	Price per ton.	Purchasers.
July 23—Marke Valley	12	£45 0 0		Daubuz and Co.

# QUICKSILVER-WAVE AMALGAMATOR COMPANY, LIMITED (MOON'S PATENT.) FOR EXTRACTING GOLD AND SILVER FROM THEIR ORES.

The following is copy letter from the assayer to the Conrad Hill Mines, North Carolina:—

The Mines and Smelting Works of the Conrad Hill Gold and Copper Company, February 6th, 1884.

As regards assays of tailings from Moon's amalgamator—"It is only occasionally now that I make any tests for gold of the tailings in question, the result for the first two months, when samples were regularly taken, proving so uniformly satisfactory as to make the continuation of such unnecessary. The machine continues to do practically clean work."

JOS. NINNIS, Assayer."

Arrangements can be made to crush and treat some tons of ore daily.

Mining engineers can make their own experiments, and carry away their own samples to be assayed.

The actual cost of treatment will be under 1s. per ton.

The company undertake that the results will be, at least, equalled in regular working. A machine 9 ft. by 2½ ft. can be attached to the batteries or stamp mills and be at work within a few hours after its delivery at the mine, and will treat 10 tons per 24 hours.

Information on all matters in connection with above can be obtained at the company's offices,—

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Full particulars and all information to be obtained from Capt. ARTHUR WATERS, Radbrook House, Shrewsbury.

# TOLIMA MINING COMPANY (LIMITED).

The Board of Directors hereby give notice that they have this day DECLARED a PREFERENCE DIVIDEND on the A capital of the company for the year ending the 31st May, 1883, at the rate of TEN SHILLINGS per share; and a DIVIDEND on the B capital of the company at the rate of FOUR SHILLINGS and FIVEPENCE per share, both PAYABLE on the 31st instant.

By Order, WM. W. HOLMES, Secretary.

No. 35, Finsbury Circus, E.C., 30th July, 1884.

# OSCAR GOLD MINING COMPANY (LIMITED).

WANTED IMMEDIATELY, by the above company, for their Mines in Norway (two days' journey from England), a REDUCTION OFFICER who thoroughly understands his business in all its branches.

Apply by letter, enclosing testimonials, and stating salary required, to The Secretary, Oscar Gold Mining Company (Limited), 8, Austin Friars, London.

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120, SUTTER STREET, SAN FRANCISCO.

Cable Address: "Delmar, San Francisco."—Branch Office: 61, Broadway, New York.

References: The London, Paris, and American Bank, Limited, 9, Tokenhouse Yard, Lothbury, London, E.C.  
**ALEX. KERLY, Esq.,** 15, Great Winchester-street, London; and numerous others.

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"Herberton Advertiser" Office Herberton, September, 1882.

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Ingénieur-Administrateur.

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CUIDAD, BOLIVAR.  
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The purchasers should receive the shares endorsed by the seller in accordance with Article 5th of the Statutes, which runs as follows:—

"ARTICLE 5th.—The shares are transferable by endorsement to be communicated to the Board of Directors by the vendor and by the buyer, or their legal attorneys. These transfers will be registered in the Share Book kept by the company for the purpose and authorised by the signature of the Treasurer."

The buyer, besides the endorsement, will receive from the vendor a letter addressed to the President of the company, stating that he has sold to N.N. the share or shares No. owned by him; the buyer will also have to communicate to the President that he has bought of N.N. the share or shares No. and request that the transfer be registered, indicating at the same time the name of a person residing in Cuidad, Bolivar, as his representative. (Signed) A. LICIONI, President.

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**LET ALL STEAM USERS COVER THEIR BOILERS AND STEAM PIPES WITH**

### TANNIC CEMENT.

And save 15 per cent. to 75 per cent. (according to situation of boiler and length of pipes) of their expenditure on Fuel.

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AGENTS WANTED.

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**F. BARTLE AND CO., of BASSET FOUNDRY, CARN BREA,** have much pleasure in announcing that they have become the PURCHASERS of an UNDIVIDED MOIETY of the ABOVE PATENT; and are, therefore, in a position to SUPPLY this FIRST-CLASS PULVERISER direct from their own Works at the shortest notice, and of guaranteed workmanship.

This Pulveriser has won several Medals, and has an unrivalled and increasing reputation for durability, cheapness, and dispatch.

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All descriptions of Mining Machinery for home and foreign parts Faggotting, Smithery, and Fitting in all its Branches.

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**RHYD-Y-MWYN FOUNDRY AND RHYD ALUN MINE**  
NEAR MOLD, FLINTSHIRE.

**MESSRS. CLOUGH AND CO.** have received instructions TO SELL, BY AUCTION, upon the Premises aforesaid, on THURSDAY the 7th day of August, 1884, the WHOLE of the VALUABLE PLANT, until recently in use, viz:—

### AT THE FOUNDRY.

A Walker's patent air compressor, only recently erected, with 10 inch cylinder and 2 feet stroke; gearing to work the same by water wheel; air receiver and piping, complete; a pair of 24 inch cylinder air compressors, 4 feet stroke, complete with the exception of fly wheel, spars shafting, and gearing, not erected; a very superior screw cutting lathe, 9 inch centres and 12 feet bed, with change wheels, belting, and overhead pulleys, complete; a capital saw bench by Cliffe and Sons, with belting and shafting, and two timber carriages and complete; two circular saws; two workmen's benches, fitted with vices, bellows, and trough; one anvil; quantity of smiths' and fitters' tools; press stone and stand; large timber wagon with iron wheels; pair of carriage wheels, quantity of old iron; ditto unsawn timber; also 140 lbs. of explosives called Potentite, and 250 detonators; also contents of office, consisting of birch paper, writing table, with desk, deal drawing table, arm and other chairs, lamp press, &c.

### AT RHYD ALUN MINE.

A vertical boiler on the surface; about 500 yards of rails and air pipes in the mine; a superior Tangye steam pump, with 15 inch steam cylinder and 6 inch ram, with 32 yards of 6 inch cast iron pipes, &c., &c.; a double purchase winding several wagons.

On another Level about 300 yards of rails and three or four wagons. Sale to commence at 1:30 P.M. punctually, at the Rhyd-y-Mwyn Foundry, which is about three minutes' walk from the Rhyd-y-Mwyn Station on the Chester, Mold, and Denbigh Line.

The Rhyd Alun Mine is about a mile from the same station. The whole of the lots may be viewed any day previous to the sale, a person being on the premises to point them out.

Further particulars may be obtained from the Auctioneers. Land Agency Office.

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**IMPORTANT SALE OF VALUABLE MACHINERY, COLLIERY AND BRICKWORKS' PLANT, AND STOCK AND OTHER EFFECTS.**

**MESSRS. JOSEPH COCKSEY AND SON** have received instructions from the Cannock and Huntington Colliery Company (Limited) TO SELL, BY AUCTION, at the above Colliery, on MONDAY, TUESDAY, the 18th and 19th days of August, 1884, at Eleven o'clock A.M. precisely each day, the WHOLE of the

**MACHINERY, PLANT, AND STOCK,**

### COMPRISING—

Horizontal high pressure WINDING ENGINES; steam boilers, including two 60 horse power Kesterton's patent boilers, with fittings; and two Hensson's patent double stokers; boiler feed engines; lofty pit frames and shafts; large quantity of costly tools and appliances connected with the "Kind of Cudron" process of sinking shafts; a quantity of cast-iron tubing for 15 feet and in sections; capacious foundry shed; revolving core driving machine; steam overhead travelling crane, to lift 25 tons, running on railway 45 feet span, with substantial timber supports; Denison's patent 16-ton crane weighing machine; powerful facing machine for pit tubing ("L'Usine de Marquise Franco"); horizontal steam engine and shafting; two hand power travelling cranes, with railways; single and double power crabs; horizontal winches, with power lifting screws; wrought iron hanging rods; steam hammer; brickwork planer about 400,000 new red bricks; wrought iron rails and wood sleepers in stock 5280 yards of tramway; quantity of pitch pine and other timber; a 10-ton weighing machine; portable weighing machine, by Avery; hydraulic testing machine; bar iron tester; wrought iron girders; large water barrel; sinker bows; smiths' tools; office furniture; wrought and cast iron scrap; and variety of other valuable and useful effects.

The colliery is situated on the Stafford-road, near the village of Huntington about two miles from the Cannock and Hednesford Stations, on the Walsall and Rugeley Branch of the London and North-Western Railway. It is connected by means of a tramway with the Staffordshire and Worcestershire Canal. Conveyances will be at Cannock Station to meet the trains arriving from Stafford and Walsall at 9:55 and 10:27 A.M.

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**FOR SALE, A PLANT OF ROCK-DRILLING MACHINERY**

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**ONE AIR-COMPRESSING ENGINE,** with 12 inch cylinder 3 and 3½ in. rock drills, stretcher bars, &c., &c. Our Machines have been driving levels in hard rock 3 to 4 fathoms per week for years. Contracts undertaken.

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**A 6 ft. pan MORTAR MILL, VERTICAL ENGINE, and BOILER** combined, on carriage and travelling wheels.

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**TWO GOOD WINDING ENGINES,** each with cylinder 15½ in. diameter, 2 ft. 7 in. stroke, with drums, brake, and reversing gear.

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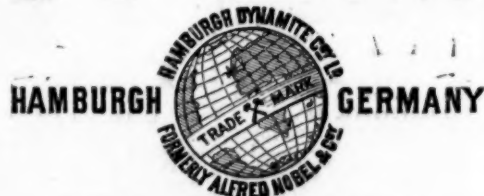
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More than One Hundred  
of them are now running in the various mining districts of the  
United States, giving results never before obtained as regards con-  
tinuous running, economy of fuel grade and quality of bullion  
produced.

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brick or stone work, thus saving great expense and loss of time in  
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Skilled and experienced smelters furnished when desired to examine  
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Price Lists and Sample Cards on application.

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the famous LEHIGH ZINC ORES of the Lehigh Valley,  
Penn., which are the Purest in the World, making a Soft,  
Ductile Spelter, Free of Lead and Arsenic, superior in all  
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Cartridge Metal, German Silver, Castings,  
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Shares.	Paid.	Last wk.	Clos. pr.	Total divs.	Per sh.	Last pd.
12000 Bedfordshire, c. Tavis. (St. Agnes) .....	0 10	0 10	1 10	0 1	0 0	0 1
12000 Blue Hills, c. St. Agnes .....	0 10	0 10	1 10	0 1	0 0	0 1
12000 Carn Brea, c. St. Agnes .....	0 10	0 10	1 10	0 1	0 0	0 1
12000 Carn Brea, c. St. Agnes .....	0 10	0 10	1 10	0 1	0 0	0 1
12000 Carn Brea, c. St. Agnes .....	0 10	0 10	1 10	0 1	0 0	0 1
12000 Carn Brea, c. St. Agnes .....	0 10	0 10	1 10	0 1	0 0	0 1
12000 Carn Brea, c. St. Agnes .....	0 10	0 10	1 10	0 1	0 0	0 1
12000 Carn Brea, c. St. Agnes .....	0 10	0 10	1 10	0 1	0 0	0 1
12000 Carn Brea, c. St. Agnes .....	0 10	0 10	1 10	0 1	0 0	0 1
12000 Carn Brea, c. St. Agnes .....	0 10	0 10	1 10	0 1	0 0	0 1

## FOREIGN DIVIDEND MINES.

Shares.	Paid.	Last wk.	Clos. pr.	Total divs.	Per sh.	Last pd.
12000 Alamosa, c. Spain .....	0 10	0 10	1 10	0 1	0 0	0 1
12000 Alamosa, c. Spain .....	0 10	0 10	1 10	0 1	0 0	0 1
12000 Alamosa, c. Spain .....	0 10	0 10	1 10	0 1	0 0	0 1
12000 Alamosa, c. Spain .....	0 10	0 10	1 10	0 1	0 0	0 1
12000 Alamosa, c. Spain .....	0 10	0 10	1 10	0 1	0 0	0 1
12000 Alamosa, c. Spain .....	0 10	0 10	1 10	0 1	0 0	0 1
12000 Alamosa, c. Spain .....	0 10	0 10	1 10	0 1	0 0	0 1
12000 Alamosa, c. Spain .....	0 10	0 10	1 10	0 1	0 0	0 1
12000 Alamosa, c. Spain .....	0 10	0 10	1 10	0 1	0 0	0 1
12000 Alamosa, c. Spain .....	0 10	0 10	1 10	0 1	0 0	0 1

Have made calls since last dividend was paid.

## NON-DIVIDEND BRITISH MINES.

Shares.	Paid.	Last wk.	Clos. pr.
12000 Aberdun, c. Denbigh .....	0 10	0 10	1 10
12000 Aberdun, c. Denbigh .....	0 10	0 10	1 10
12000 Aberdun, c. Denbigh .....	0 10	0 10	1 10
12000 Aberdun, c. Denbigh .....	0 10	0 10	1 10
12000 Aberdun, c. Denbigh .....	0 10	0 10	1 10
12000 Aberdun, c. Denbigh .....	0 10	0 10	1 10
12000 Aberdun, c. Denbigh .....	0 10	0 10	1 10
12000 Aberdun, c. Denbigh .....	0 10	0 10	1 10
12000 Aberdun, c. Denbigh .....	0 10	0 10	1 10
12000 Aberdun, c. Denbigh .....	0 10	0 10	1 10

## NON-DIVIDEND MINES—continued.

Shares.	Paid.	Last wk.	Clos. pr.
12000 North Molton, c. Devon .....	0 10	0 10	1 10
12000 North Molton, c. Devon .....	0 10	0 10	1 10
12000 North Molton, c. Devon .....	0 10	0 10	1 10
12000 North Molton, c. Devon .....	0 10	0 10	1 10
12000 North Molton, c. Devon .....	0 10	0 10	1 10
12000 North Molton, c. Devon .....	0 10	0 10	1 10
12000 North Molton, c. Devon .....	0 10	0 10	1 10
12000 North Molton, c. Devon .....	0 10	0 10	1 10
12000 North Molton, c. Devon .....	0 10	0 10	1 10
12000 North Molton, c. Devon .....	0 10	0 10	1 10

blende, c. copper; g. gold; l. lead; s. silver; st. steel; silver-lead; t. tin; z. zinc; i. iron; a. arsenic; d. diamond; Limited Liability Companies; † quoted on the Stock Exchange; ‡ have paid dividends.

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## NON-DIVIDEND FOREIGN MINES.

Shares.	Paid.	Clos. pr.
12000 Alamosa, c. Spain .....	0 10	1 10
12000 Alamosa, c. Spain .....	0 10	1 10
12000 Alamosa, c. Spain .....	0 10	1 10
12000 Alamosa, c. Spain .....	0 10	1 10
12000 Alamosa, c. Spain .....	0 10	1 10
12000 Alamosa, c. Spain .....	0 10	1 10
12000 Alamosa, c. Spain .....	0 10	1 10
12000 Alamosa, c. Spain .....	0 10	1 10
12000 Alamosa, c. Spain .....	0 10	1 10
12000 Alamosa, c. Spain .....	0 10	1 10

## FINANCIAL AND INVESTMENT.

Issue.	Shares.	Paid.	Clos. pr.
12000 Alamosa, c. Spain .....	0 10	1 10	1 10
12000 Alamosa, c. Spain .....	0 10	1 10	1 10
12000 Alamosa, c. Spain .....	0 10	1 10	1 10
12000 Alamosa, c. Spain .....	0 10	1 10	1 10
12000 Alamosa, c. Spain .....	0 10	1 10	1 10
12000 Alamosa, c. Spain .....	0 10	1 10	1 10
12000 Alamosa, c. Spain .....	0 10	1 10	1 10
12000 Alamosa, c. Spain .....	0 10	1 10	1 10
12000 Alamosa, c. Spain .....	0 10	1 10	1 10
12000 Alamosa, c. Spain .....	0 10	1 10	1 10

## INSURANCE COMPANIES.

Issue.	Shares.	Paid.	Clos. pr.
12000 Alamosa, c. Spain .....	0 10	1 10	1 10
12000 Alamosa, c. Spain .....	0 10	1 10	1 10
12000 Alamosa, c. Spain .....	0 10	1 10	1 10
12000 Alamosa, c. Spain .....	0 10	1 10	1 10
12000 Alamosa, c. Spain .....	0 10	1 10	1 10
12000 Alamosa, c. Spain .....	0 10	1 10	1 10
12000 Alamosa, c. Spain .....	0 10	1 10	1 10
12000 Alamosa, c. Spain .....	0 10	1 10	1 10
12000 Alamosa, c. Spain .....	0 10	1 10	1 10
12000 Alamosa, c. Spain .....	0 10	1 10	1 10

## TELEGRAPH COMPANIES.

Shares.	Paid.	Clos. pr.
12000 Alamosa, c. Spain .....	0 10	1 10
12000 Alamosa, c. Spain .....	0 10	1 10
12000 Alamosa, c. Spain .....	0 10	1 10
12000 Alamosa, c. Spain .....	0 10	1 10
12000 Alamosa, c. Spain .....	0 10	1 10
12000 Alamosa, c. Spain .....	0 10	1 10
12000 Alamosa, c. Spain .....	0 10	1 10
12000 Alamosa, c. Spain .....	0 10	1 10
12000 Alamosa, c. Spain .....	0 10	1 10
12000 Alamosa, c. Spain .....	0 10	1 10

## IRON AND COAL COMPANIES.

Shares.	Paid.	Clos. pr.
12000 Alamosa, c. Spain .....	0 10	1 10
12000 Alamosa, c. Spain .....	0 10	1 10
12000 Alamosa, c. Spain .....	0 10	1 10
12000 Alamosa, c. Spain .....	0 10	1 10
12000 Alamosa, c. Spain .....	0 10	1 10
12000 Alamosa, c. Spain .....	0 10	1 10
12000 Alamosa, c. Spain .....	0 10	1 10
12000 Alamosa, c. Spain .....	0 10	1 10
12000 Alamosa, c. Spain .....	0 10	1 10
12000 Alamosa, c. Spain .....	0 10	1 10

## BANKS.

Shares.	Paid.	Clos. pr.
12000 Alamosa, c. Spain .....	0 10	1 10
12000 Alamosa, c. Spain .....	0 10	1 10
12000 Alamosa, c. Spain .....	0 10	1 10
12000 Alamosa, c. Spain .....	0 10	1 10
12000 Alamosa, c. Spain .....	0 10	1 10
12000 Alamosa, c. Spain .....	0 10	1 10
12000 Alamosa, c. Spain .....	0 10	1 10
12000 Alamosa, c. Spain .....	0 10	1 10
12000 Alamosa, c. Spain .....	0 10	1 10
12000 Alamosa, c. Spain .....	0 10	1 10

## GAS COMPANIES.

Issue.	Shares.	Paid.	Clos. pr.
12000 Alamosa, c. Spain .....	0 10	1 10	1 10
12000 Alamosa, c. Spain .....	0 10	1 10	1 10
12000 Alamosa, c. Spain .....	0 10	1 10	1 10
12000 Alamosa, c. Spain .....	0 10	1 10	1 10
12000 Alamosa, c. Spain .....	0 10	1 10	1 10
12000 Alamosa, c. Spain .....	0 10	1 10	1 10
12000 Alamosa, c. Spain .....	0 10	1 10	1 10
12000 Alamosa, c. Spain .....	0 10	1 10	1 10
12000 Alamosa, c. Spain .....	0 10	1 10	1 10
12000 Alamosa, c. Spain .....	0 10	1 10	1 10

## TRAMWAYS.

Issue.	Shares.	Paid.	Clos. pr.
12000 Alamosa, c. Spain .....	0 10	1 10	1 10
12000 Alamosa, c. Spain .....	0 10	1 10	1 10
12000 Alamosa, c. Spain .....	0 10	1 10	1 10
12000 Alamosa, c. Spain .....	0 10	1 10	1 10
12000 Alamosa, c. Spain .....	0 10	1 10	1 10
12000 Alamosa, c. Spain .....	0 10	1 10	1 10
12000 Alamosa, c. Spain .....	0 10	1 10	1 10
12000 Alamosa, c. Spain .....	0 10	1 10	1 10
12000 Alamosa, c. Spain .....	0 10	1 10	1 10
12000 Alamosa, c. Spain .....	0 10	1 10	1 10

## MISCELLANEOUS.

Shares.	Paid.	Clos. pr.
12000 Alamosa, c. Spain .....	0 10	1 10
12000 Alamosa, c. Spain .....	0 10	1 10
12000 Alamosa, c. Spain .....	0 10	1 10
12000 Alamosa, c. Spain .....	0 10	1 10
12000 Alamosa, c. Spain .....	0 10	1 10
12000 Alamosa, c. Spain .....	0 10	1 10
12000 Alamosa, c. Spain .....	0 10	1 10
12000 Alamosa, c. Spain .....	0 10	1 10
12000 Alamosa, c. Spain .....	0 10	1 10
12000 Alamosa, c. Spain .....	0 10	1 10

London: Printed by RICHARD MIDDLETON, and by HENRY ENGLISH (the proprietors), at the "MIDLAND PRESS," 25, FLEET STREET, E.C., where all communications should be addressed.—Aug. 2, 1884.